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No. 68

The Manley Collection of Stone Age Tools

BY

A. AIYAPPAN  
with

Topographical and other Notes

BY

FRANK P. MANLEY







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THE MANLEY COLLECTION OF  
STONE AGE TOOLS

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TOPOGRAPHICAL AND OTHER NOTES

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## LIST OF PLATES.

### PLATE

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# THE MANLEY COLLECTION OF STONE AGE TOOLS.

## INTRODUCTION.

With the exception of fourteen specimens from the Chingleput and Guntur districts the artifacts catalogued and described in this memoir were collected by Dr. Frank P. Manley of the American Baptist Telugu Mission from various sites all over the Nellore District. In the course of his long stay in this District where some years of his early youth were also spent, Dr. Manley had acquired a thorough knowledge of its geology and topography, and from these subjects it was a natural transition to its prehistoric archæology. He has described elsewhere<sup>1</sup> how he began his collection in the neighbourhood of his own compound in Nellore town when he was stationed there a few years ago. In 1939, Dr. F. H. Gravely, Superintendent of the Government Museum, and myself were invited by Dr. Manley to see his collection. We visited several of the sites on our way to Nellore from Madras, the most important and interesting among them being the one named R<sup>1</sup> in the list below. From Nellore we proceeded westwards as far as the Somasila pass seeing the sites on the way and skirting the foot of the Veligondas near Kulluru village. In the course of a second visit, I visited the sites near Tettu, Ramapatnam and Gudluru. Dr. Manley had listed his tools very carefully, and the descriptions of the sites (pp. 3-10) are mainly based on information given by him. Several of Dr. Manley's students and assistants at the Theological Seminary at Ramapatnam have begun to take an intelligent interest in the stone tools which they often have the pleasure of seeing in his "Museum" room.<sup>2</sup> The present collection can be said to be fairly exhaustive as far as the Nellore town, Ramapatnam and Tettu areas are concerned, but the time that Dr. Manley could devote to the exploration of other sites has been brief in comparison. His topographical notes and the representative samples that he has accumulated from a large number of new sites make the task of the future workers in this area lighter than it would otherwise be.

Dr. Manley presented in 1939 a small series of implements from his collection to the Madras Museum.

*Previous Finds of Paleoliths in the Nellore District.*—Three years after his first discovery of Indian paleolithic tools, Foote collected quartzite artifacts from the valley of the Manneru river, in the year 1867. Of these fourteen are included in the Foote collection described by the great prehistorian, and fourteen others (numbered 33 to 46) are mentioned in the earlier *Catalogue of Prehistoric Antiquities*

<sup>1</sup> *Current Science* for February, 1940.

<sup>2</sup> Rev. B. Benjamin of Ramapatnam told me that cow-herd boys often fashion rough tools of quartz to cut up the birds they kill and scorch.



in the *Madras Museum*. Two hand-axes (numbered 2204-21 and 2204-22) are figured in plate I of Foote's *Indian Prehistoric and Protohistoric Antiquities—Notes on Ages and Distribution*. Specially remarkable among the tools from the Mannaru valley collected by Foote is a hand-axe with a very large flake-scar on one side calling to mind the Vaal technique of South Africa. The pebble-butted Acheulean hand-axe in the Foote Collection is also extremely well-made.

Three specimens from the Nellore District are included in the *Catalogue of Prehistoric Antiquities in the Indian Museum* by Coggin Brown. They bear the numbers 527, 532 and 538, and were collected by Foote. The first was from Ramapatnam (Plate VII), the second from Tyloor, and the locality of the third is not recorded. They were all quartzite *coups-de-poing*.

H. W. Seton-Karr reported in 1909 that one of his "agents" sent him a few paleoliths from the region of "the Pennar river, north of Madras".<sup>1</sup> Since this is all the topographical information given in the published note, it is not possible to say definitely that the finds came from the Nellore District even if it be granted that "Pennar" is "Penner" misspelt.

*Geography of the District.*—The Nellore District lies within latitudes  $13^{\circ} 30'$  and  $16^{\circ}$  and longitudes  $79^{\circ}$  and  $80^{\circ} 20'$ . The Veligonda Hills which form its western boundary are a steep range with an average height of about two thousand feet, rising abruptly from the plains. The latter are seldom more than a hundred and fifty feet above the sea-level. There is also a low and narrow plateau or chain of inconspicuous elevations of sandstones<sup>2</sup> with a lateritic capping, running parallel to the coast about ten to twenty miles from the shore. This ridge corresponds to the Red Hills region of Chingleput District, and is about forty to seventy feet above the sea-level. The laterite capping is implementiferous like the Red Hills region. Between the coastal plateau and the Veligondas is the low country which is, as a rule, infertile, and covered with scrub jungle. The alluvial flat land between the ridge and the sea is low and has numerous lagoons and backwaters.

The four important rivers are the Penner, Swarnamukhi, Kandleru and Mannaru. The first rises far to the west and has worn out a gorge for itself in the Veligondas at what is known as the Somasila pass. In the fields at the foot of the hills near the pass implements were found. Prehistoric men of Nellore must have used the pass to cross into the Cuddapah District where also their tools have been discovered. Foote collected paleoliths from the basin of the Mannaru river, and the bulk of the present collection is from the drainage area of the Penner. The basin of the Swarnamukhi river is almost unexplored.

Laterite occurs all along the coastal plateau as a band of varying breadth and broken in many places by denudation. King writes that patches of laterite are found nearly everywhere in the interior, particularly at the base of the Kalahasti ranges and in the plains lying below the southern portion of the Veligondas. That the laterite was once more prevalent, and the beds were thicker is shown by the presence in the very level coastal tracts of a laterite-

<sup>1</sup> "Some recent Indian Paleolithic Implements", *Man*, ix, p. 137.

<sup>2</sup> Or disintegrated granitic rock.



topped hill at Kota near Durgarazupatnam. This fact is further supported by a very extensive table-land of laterite which rises between Gudur and Sarvepalli. In a well section at Ramapatnam, about six furlongs from the coast, laterite occurs in considerable thickness about twelve feet below the surface under stiff sandy clay. About half a mile west of the well is a hillock of laterite about eighty feet high.<sup>1</sup>

### DESCRIPTION OF THE SITES.

The sites have been indicated by letters of the alphabet, and after the letters of the alphabet have been exhausted, by Arabic numerals (Plate VII).

A. About halfway between the third and the fourth milestones, the Nellore-Kaluvaya Road crosses a high brick bridge over a gully. This gully with its tributaries both north and south of the road constitutes site A.

About two furlongs south of the road, the eastern bank of the gully is nearly perpendicular and a good section can be observed there (Plate 1 a). The uppermost layer consists of sandy clay with laterite nodules, the thickness of the layer varying from a few inches to a foot. This layer seems to cover the valley floor quite extensively. No implements were found *in situ* in the area that was examined, though a few implements were found on the surface. Below this is a layer of mixed clay, angular fragments of quartz, laterite nodules and scattered chips of quartzite. Its thickness is only a few inches in some places but in others it is about a foot. A few implements were found *in situ* in this layer. Below this was the bedrock of quartz and felspar, the latter disintegrating into clay. Implements were found chiefly on the slopes of the gully below the gravel layer. This was the site<sup>2</sup> at which implements were first found.

B. A shallow stream bed running down to the Nellore tank north of Muttukurutippa,<sup>2</sup> just off the edge of the laterite, west of the Kaluvaya road about two and a half miles from Nellore. The ground is covered with sand and fine gravel. The implements were very greatly weathered.

B<sup>1</sup>. Consists of the gravel pits dug deeply into the laterite on both sides of the Nellore-Kaluvaya road between milestones one and two. The pits for the most part have been dug in loose laterite, but masses of very hard laterite are exposed in the digging. Most of the implements were found on the floors of the pits, and some *in situ* on the sides of the pits. Some of the tools from the laterite conglomerate had hard laterite firmly attached to them.

B<sup>2</sup>. A single shallow gravel pit dug in the laterite adjacent to the Madras trunk road about one hundred feet from the Nellore municipal limit.

C. The hillock of Muttukuru-tipa. The single specimen listed was found on the north slope.

D. The American Baptist Mission compound at mile 106 on the Madras trunk road and adjacent area. This is within the Nellore municipal limit. It

<sup>1</sup> The geology of the district is dealt with fully by King in *Mem. Geol. Survey of India*, xvi, 1880.

<sup>2</sup> There is here a ridge of laterite roughly parallel to the sea-coast varying considerably in width from a few hundred feet to two miles or more and some sixty miles or more in length. One of the highest points in this ridge is Muttukuru-tipa, about two miles southwest of Nellore. It rises to a height of 133 feet above the sea-level. The road to Podalakur and Kaluvaya skirts this ridge. At Muttukuru-tipa the laterite formation ends abruptly.



is a level plain overlying a solid laterite formation, which is visible on the surface at many points. A well in the mission compound shows the laterite to be about twenty feet thick. Beneath the laterite at that point is clay, which appears to be identical with the decomposed felspar noted in the gully section on site A. The implements were all surface finds.

E. On the Nellore-Rapur road between the 22-4 and 23-4 furlong stones. A shallow stream-bed parallels the road on the south. For the greater part of the distance it is open and shallow but before emptying into a tank it runs through a steep-sided gully the banks being as much as ten feet high. The specimens found here show evidence of much rolling. Some were found *in situ* in the side of the gully, at five to six feet below the surface. The gully is in clay formation.

The stream is between the villages Degapudi and Degapudirachapalem and is south of the Kandleru river. The Kandleru river is a torrential stream and its bed is full of quartzite pebbles; the exploration of this river and its tributaries might give interesting results.

This site is two miles northwest of the Kalichedu mica mine, the most important mica mine in the district.

F. On the Nellore-Kaluvaya road where the road crosses R. *Nallavagu* between the village of Peddagopavaram and the 32nd milestone. The specimens were found in a gully flowing into the stream from the west, immediately south of the road. The gully is about ten feet deep and some specimens were found *in situ* low down on the bank. The gully is cut in a clay formation containing some gravel.

G. On the Nellore-Kaluvaya road where the road crosses a very wide and shallow stream-bed at about the fifth furlong after the 23rd mile. The nearest village is about two furlongs to the south and is named Revillayerraguntapalem. The banks of this stream are covered with a fairly extensive deposit of quartzite pebbles, but the actual bed is sandy. One specimen G. 2 (Plate II h) was found *in situ* embedded in clay on the eastern bank of the stream on the south side of the road. The implement was about a foot below the surface.

H<sup>0</sup>. On the Nellore-Kaluvaya road and includes the entire area from the 40/3 mile to the outskirts of the town of Kaluvaya. Specimens were gathered from the fields on either side of the road. The most important place, however, was a deep gully crossed by a high bridge about a quarter of a mile east of the dak bungalow. Several specimens were found *in situ* in the sides of the gully which gives a good section of the formation. This is closely comparable to the section of site A and will repay close study by a competent geologist. Laterite nodules of the second layer in site A are not however noted here. A very interesting specimen was found *in situ* about 18 inches below the surface in the gully bank about two furlongs south of the road.

H<sup>1</sup>. On the Nellore-Kaluvaya road where the road crosses the stream Gundlapati, a western tributary of the *Nallavagu* between the village of Kanpurupalli and the 33rd milestone. Only a few specimens were found here.

H<sup>2</sup>. Near the Nellore-Kaluvaya-Somasila road, beyond Kaluvaya town. The nearest milestone is the 44th. The specimens were found in fields between



the village of Kulluru and the foot of the hills. The lower slopes of the hills here are strewn with great numbers of massive pebbles of quartzite, the rounded shape of which is particularly notable. Among the pebbles were found several that were cleaving into halves as a result of exposure to sun, etc. The adjacent hills are very massive quartzite formation running up to 2246 feet opposite Kulluru.

H<sup>3</sup>. On the same road as above beyond Kaluvaya near mile 43/3, near the village of Venkatareddipalli. The tools were found in the fields near the road.

H<sup>4</sup>. On the same road at mile 40/1. A single specimen was found in a gully with steep sides. The area is an uncultivated stony waste.

H<sup>5</sup>. On the same road at mile 39/1, immediately west of the village of Topugunta. The road here fords a wide shallow stream bed. The bed of the stream has numerous pebbles of quartzite. On either side of the road on the western side of the stream the soil is clay with small pebbles of quartz and fragments of felspar giving the area a light colour. Implements were found among the pebbles, and considering the area surveyed, the number of tools is large. It will be interesting to explore the country further upstream.

H<sup>6</sup>. On the Nellore-Kaluvaya road at mile 37, where the road crosses a wide stream bed. The banks of the stream bed are of gravelly clay. A tributary stream comes in from the west on the south side of the road. Specimens were gathered on the western side of the main stream.

H<sup>7</sup>. On the Kaluvaya-Somasila road at mile 45/6 near the village of Rajupalem. Two specimens were picked up on the road-side from the cultivated fields.

H<sup>8</sup>. On the Nellore-Kaluvaya road at mile 35 about furlong 3, near the village of Chintalatmakuru. Three artifacts were picked up west of the village.

I. South of the village of Devarapalem seven miles west of Nellore town, and just east of Narasimhakonda hill (497 feet above sea level). The specimens were found in the jungle on the surface of the approximately level ground at the foot of the hill. The formation here is solid quartzite, the hill also being massive quartzite formation. There is no laterite in this area.

I<sup>1</sup>. The area in the triangle with the villages of Mulumudi, Vellanti and Mopuru at the three corners. Mulumudi is about nine miles due west of Nellore town. Specimens were collected from the open fields and from the bed of a gully that leads into the Mulumudi tank. The site is particularly rich and will repay a closer examination.

J<sup>1</sup>. On the Kavali-Udayagiri road, at mile stone 4, in the neighbourhood of the bridge over the stream, near the village of Zammulapalem. The stream bed is shallow and sandy with banks of gravel here and there. Specimens were found on the gravel banks.

J<sup>2</sup>. On the same road as above, at a point where the road traverses a newly built embankment over an area of low-lying waste land. This is about mile 10 not far from the village of Chinnakraka. The earth for the embankment has been taken from shallow pits not more than eighteen inches in depth on either side of the road. The specimens were found on the surface of the ground and in the pits.



J<sup>3</sup>. On the Kavali-Udayagiri road, at a small village adjacent to the road on the south at about the eighteenth mile. Skirting the road on the north side is a deep ditch dug in rocky ground to carry the drainage water. The ditch is five or six feet deep. Across the ditch north of the road the level field is covered with quartzite pebbles. A great many of them appear to have been fractured and split and chipped by natural agencies. A few specimens that appeared to be of human workmanship were gathered. Between this site and the town of Kaligiri there are low hills the slopes of which are thickly strewn with quartzite pebbles.

K. Udayagiri town sixtyfive miles west of Kavali. The locality where specimens were collected is the bed of the stream flowing into the Udayagiri tank between the Mission compound and a deserted Hindu temple which is now a protected monument.<sup>1</sup> Specimens were found not only in the stream bed but also in the fields adjoining it. Some specimens were picked up from inside the walled-in area round the temple.<sup>2</sup> The site is adjacent to the Udayagiri hill which rises 3,600 ft. above sea level. This hill is composed of a very massive stratum of quartzite many hundreds of feet thick resting upon a foundation of mica schist. The stream in the bed of which the specimens were found is in places a rocky torrent the boulders being of quartzite and schist.

K<sup>1</sup>. On either side of the road eastwards from Udayagiri for about a mile. Specimens were found on the jungle floor. It is quite likely that specimens will be found further east. The jungle floor is sandy with outcrop of quartzite rock.

L. On the Udayagiri-Atmakur road, from the Mission compound southward on both sides of the road. Specimens were found in considerable numbers on the surface of the ground. Sites K<sup>1</sup> and L are similar in nature and are separated at the most by the distance of a mile.

M. On the main footpath from Udayagiri westwards to the mountain. The fields traversed by the footpath are thickly strewn with quartzite pebbles, large and small, and quartzite fragments. Amongst these fragments were found a few which appeared to be artifacts.

M<sup>1</sup>. Udayagiri hill. The specimens picked up here have the appearance of artifacts but their artificial nature appears to be doubtful.<sup>3</sup>

N. A series of shallow stream beds in rocky jungle country traversed by the Nellore-Udayagiri road between milestones 46 and 54.

N<sup>1</sup>. About the 43rd mile on the Nellore-Udayagiri road where a shallow stream crosses the road and empties itself into the Boggeru river. The specimens were found in the stream and the adjacent fields.

O. The area between Singarayakonda and Kandukur as explained below. Specimens marked O-1 to O-41 were gathered from shallow stream beds crossed by

<sup>1</sup> Dr. Manley tells me that quartzite has been used extensively for building purposes in the ancient fort of Udayagiri, steps and lintels of massive proportions being still found there worn by use and by the splitting of the quartzite. As it is a very refractory kind of stone it is not generally used for building or other purposes though it is harder than granite.

<sup>2</sup> A small heap of specimens were concealed among the bushes growing below the rivetment wall on the west side of the stream near the temple. There is every likelihood of their being there when some one interested in them visits the sites on a future occasion.

<sup>3</sup> Dr. Manley has kept a heap of similar chipped pebbles concealed in a small cave adjacent to the path up the hill.



the road between Singarayakonda and Kandukur; O-15 to O-20 were gathered from the road side ditch between the centre of Kandukur and the Baptist Mission compound three furlongs west of the town; and O-21 to O-29 were found in the ploughed fields adjacent to the Mission compound.

O<sup>2</sup>. The last vacant field south of the road as one enters Kandukur from the east.<sup>1</sup>

P. Ongole in the Guntur District. Specimens were found in a valley west of the Baptist Mission Hospital. The valley is a high stony area partly cultivated and partly waste between two hills which are quartzite formations.

Q. Yerrapalem in Guntur District, one mile west of the trunk road and about twenty miles north of Ongole. Specimens were found in a field and a stream bed just outside the village adjacent to a small rocky hill. The site would be worth looking into.

R. A series of shallow streams crossed by the Madras-Nellore road between the 58th and 70th mile stones. This is an area of laterite formations in arid and jungly country. The streams are all small and unimportant, and the specimens few.

R<sup>1</sup>. A special spot north of the area R at mile 72/3 where a fairly large number of primitive looking implements were found with a few well-made types of an advanced technique, all the tools mixed up with rounded quartzite boulders on a waste patch of ground in the midst of cultivated fields on the western side of the road. To the north of the patch of boulders is a tank bund. How far the implementiferous area extends westwards has not been ascertained. A couple of tools were picked up in the field between the road and the tank bund.

T. The area along the Madras-Nellore trunk road from about mile 96 to mile 102. The nearest villages are Kakuturu and Kummumapudi. Specimens of uniformly primitive type were found in gravel pits dug in the laterite adjacent to the road. The laterite ridge in this area slopes towards the sea and the layer of laterite near the road appears to be thick in parts. Angular fragments of quartz are seen in some of the pits. Specimens marked T are from the fields between the village of Kakuturu and the road; those marked T<sup>1</sup> are from gravel pits between furlongs 3 and 4 in mile 100; and those marked T<sup>2</sup> are from gravel pits between miles 96 and 97.

U. At mile 33 on the Madras-Nellore trunk road. Specimens were found on either side of the road. Outcrops of fairly well-consolidated laterite were found on the west side of the road; to the east they were more disintegrated. The laterite here was dark brown. Being not far from the Pulicat lake the soil here is sandy and salty. A good many quartzite chips can be seen imbedded in the hard laterite on the west side of the road.

V. On the Madras-Nellore road at mile 74 at the corner of the road leading to the village Pedapariya. Here a shallow stream bed parallel to the branch road goes under a culvert on the main road. Specimens were found on the stream bed on both sides of the main road and a field to the north.

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<sup>1</sup> This has since been built upon.



W. An area on the Madras trunk road at the point where the branch road runs eastwards to Allur at mile stone 128. This is on a laterite ridge, very extensive and high, like the laterite plateau of Nellore town area. The nearest village is Ulavapalli on the road to Allur. Implements were got from a shallow stream bed and from the open ground.

X. On the road from Venkatachalam Chatram to Sarvepalli near the third mile stone. Here a stream bed full of quartzite pebbles crosses the road. Though many of the pebbles appeared to be broken, extensive search revealed only one artifact. The Venkatachalam-Sarvepalli road branches off from the the Madras-Nellore trunk road at mile 98.

Y. Near the Y. M. C. A. camp at Tonekela near Avadi in the Chingleput District.

Z. On the Nellore-Atmakur road between mile stones 19 and 20. Specimens were found on the rocky field adjacent to the road on the slope of a small hill of quartzite formation.

2. Near the Tettu railway station (M. & S. M.). Includes the area east of the railway line lying on both sides of the road from the station to the Tettu-Ramapatnam road, and also the adjacent area north of the latter road. This is the westward marginal slope of the laterite spread that attains its maximum height locally in the laterite hillock northeast of the Tettu railway station. This hillock has a Hindu temple surmounting it. The laterite constituting the hill is more compact than that found at lower levels, but not so well consolidated as that found further south at Kavali from where laterite blocks for building purposes are got by the people of Tettu and its neighbourhood. Near the Tettu village west of the trunk road, there is a deep gully on the banks of which good sections of the area adjacent to the railway station can be seen. There is a superficial stratum of mixed felspar clay and laterite nodules. This is of varying thickness averaging about a foot and a half. Underlying this there is disintegrating felspar with masses of quartz that are breaking up. An implement was found at a depth of about two feet from the surface in the upper layer.

That the laterite dips downwards near the sea-shore is shown by the section visible in the deep well that supplies water to the Baptist Mission compound. The well is about a mile from the station. Its section is as follows:—

Stiff sandy clay, 12 ft.

Moderately consolidated laterite, 9 ft.

White clay.

Most of the implements from site 2 were found on the surface.

3. The jungle floor south of the Tettu-Ramapatnam road between the Tettu hill and the boundary of the reserved forest. Specimens were found on the surface. In places where the surface is broken, laterite is visible and seems to be present at a slight depth all over the area.

4. The bed of Ramapatnam tank directly north of the mission compound. Specimens were found in the bed of the tank itself, and the stream that flows into the tank from the northwest. In the channel very solid laterite is exposed.

5. A gravel pit north of the Tettu-Ramapatnam road between miles 1 and 2



6. On the Tettu-Gudluru road. A shallow gravelly stream bed crosses the road just west of mile stone 14. Specimens were collected from the stream on both sides of the road.

10. On the road from Gudluru to Tettu, where it crosses a shallow stream west of the mile stone 14. Specimens were found on the slopes of the channel on both sides of the road. The area is a barren jungle, the stream having cut a few feet into a clay deposit in which laterite nodules occur. This road from Gudluru joins the trunk road to Madras between mile stones 149 and 150.

11. Waste and arid jungle land along the road mentioned above from the town of Gudluru and eastward about two miles. The formation is mostly a reddish clay with some sand and laterite nodules. The specimens were on the surface or in very shallow stream beds.

12. Half a mile north of Gudluru along the road to Kandukur. Specimens were found in Gudluru town in road-side ditches and on the surface. The formation is mostly clay.

13. From Gudluru south to Mogalluru (two miles). An arid area of rolling land and sparse jungle. Ground sandy clay, with some laterite. Specimens found mostly on the open ground rather than in the gullies.

14. Between Gudluru and Rajupalem. Arid area of sparse jungle. Specimens found on the surface.

15. Between Gudluru and Potluru. As above.

20. The area adjacent to the Madras trunk road between mile stones 148 and 149. Specimens were found in the road-side ditches and on the surface in the nearby jungle. The formation is clay and laterite.<sup>1</sup>

29. An artificial drainage channel crossed by the Madras trunk road south of mile stone 149. This is quite a deep channel which runs eastwards and passes under the railway line. Specimens were found only within the channel, either on the bottom or on the sloping sides. As the material thrown out of the channel forms an embankment on either side it is impossible for specimens to enter the channel from other sources. A number of specimens were found *in situ* in the red clay; some were three feet below the surface of the surrounding jungle floor. It may be assumed that all the specimens found are, in fact, *in situ* specimens as they could have come only from the gravel layer exposed at approximately this depth. The channel is of recent construction. The adjacent rock formation is laterite.

30. On the Madras trunk road near mile 151/3.5. Specimens were taken from the stream bed which was explored for about a mile to the west.

35. Chagollu village, west of the trunk road at about mile 155. Specimens found on the surface, just north of Madagapalem.

50. A stream bed crossed by the railway line at culvert No. 440 about half a mile north of Alluru Road station at about the 128th mile stone on the trunk road north of Nellore. The trunk road also is crossed by this stream bed but it has not been explored near the road.

<sup>1</sup> The gap between the numbers is due to numerals having been assigned to possible future collecting grounds in blocks in order to make it possible to give consecutive numbers to adjoining areas.



60. Singarayakonda. Specimens gathered from gullies north of the road to Kandukur. This road intersects the trunk road from Madras at right angles just south of Singarayakonda. The area yielding specimens is between the trunk road and the road leading diagonally north-east to Singarayakonda railway station. It is a high rolling ground, clay and gravel overlying quartz rock.

### SPECIAL NOTES ON SOME OF THE SITES.

The presence of a very large number of flakes and fabricators shows that sites A, B, C and D, all in the neighbourhood of Nellore town, must have been factory sites that were continuously used.

The Udayagiri region (sites K, L and M) seems to have been an unprogressive area of paleolithic culture. The artifacts of this locality are primitive and crude. On the basis of patination three sub-divisions can be made in them, the first with yellowish brown patina, the second with light patination, and the third fresh-looking. The most developed flaking technique seen in the last of the three groups falls below the moderately evolved Acheulean technique of the other sites. Cleavers are not found, the few tools that have a rough likeness to them being mostly core artifacts. Being away from the more hospitable tracts of the district, paleolithic culture probably did not develop at Udayagiri beyond its early phases dominated by the pebble or core hand-axes.

Site R<sup>1</sup> is of special interest as some of the largest tools in the collection came from it. The most primitive-looking among the pebble tools were also found here. The culture—as far as the collections indicate—was mainly of core tools. The occurrence of Abbevillian *coups-de-poing* of an early type with pebble tools of the Pre-Stellenbosch facies lends support to the view that the former was probably evolved from the latter.

A remarkable feature of the sites 2 to 5 is that the tools are generally small, possibly due to the paucity of suitable material in the coastal tracts.

### RAW MATERIALS.

*Quartz and Chert.*—The most interesting tools in the present collection are the *coups-de-poing*, blades, and awls made of quartz. A good number of mesolithic tools of this material are found in the Foote collection, but none have the size and excellence of those found in the Nellore District. In the blade No. A-294 made of very clear quartz the flake-scars are distinctly seen. Only one tool, C-1, an end-scraper, is made of chert.

*Quartzite.*—The rest of the artifacts are all made of quartzite. This raw material was available in the form of rounded pebbles which are common in stream-beds. Large numbers of them were seen by us on the fields at the foot of the hills west of Kalluru village not far from the Somasila Pass. Long ridges of rounded boulders comparable to those of the boulder conglomerates of the Chingleput district are found near Sangam and also to the east of Kaligiri on the northern side of the Kaligiri-Kavali road. As it is believed that the sea once extended as far west as the Veligondas it is likely that these pebbles were rounded by the



action of waves on quartzite outcrops. The availability of quartzite in an easily usable form, has, in the opinion of Foote, led to the high development of paleolithic tools in the districts immediately north of Madras<sup>1</sup>.

In a spread of shingle as at Kulluru, it is possible to see pebbles and boulders of quartzite chipped by nature and simulating the cruder kinds of artifacts. Flakes can be seen coming off along plains of weakness in the boulder. The first impulse to use these sharp-edged flakes, and then to manufacture similar tools from entire boulders, may have arisen in the mind of paleolithic men when they explored the regions in the neighbourhood of the boulder conglomerate beds.

As the raw material is so plentiful, a high percentage of crude pebble tools are likely to be expected in the Nellore area as in the Punjab,<sup>2</sup> but numerically the predominant types are Abbevillian and Acheulean hand-axes.

### FRACTURE, WEATHERING AND PATINATION.

To get a clear idea of the evolutionary history of the quartzite tools, a knowledge of the nature of the weathering and fracture of quartzite is needed as well as of stratigraphy and climatology. To this the field-worker can contribute a good deal. The fracture of quartzite is conchoidal, but not in a marked degree. By dropping heated pebbles into cold water, it can be shown that the lines of fracture are low arches (Plate I b, c). In some tough pebbles the fracture is irregular, and implements made of such are always found to be crude and badly finished. With some practice, it becomes 'easily possible for the eye to distinguish between a flake-scar produced by thermal action and another caused by the impact of a blow on a small area on the surface. The latter leaves most often a small battered region on the point where the blow fell, and at the edge of the scar makes a depression in the middle of its concavity.

In some natural pebbles and in several of the tools in the collection cones and bulbs of percussion are seen.

How the long thin blades were produced is a subject that requires investigation.

No one who has visited the shingle beds or beds of rivers strewn with pebbles can escape the conclusion that the shape of several of the tools has been determined by the shape of the pebble from which they have been fashioned. Flat ovate pebbles are by no means uncommon, and Dr. Manley had several of them in his collection for comparison. V-27 (Plate IV h) is a neat scraper made from a flat pebble with very little effort.

Very few of the tools in this collection have the lustrous patina seen in flint artifacts. Only one tool, R<sup>1</sup>-46 (Plate II g) has a smooth lustrous grey surface, the colour of the quartzite in this case being light greenish grey. We do not know from what kind of stratum this interesting tool came. In the field where it was picked up, the tools found were mixed with pebbles thrown on a patch of waste land, but this tool must undoubtedly have originally been in some loamy bed favourable to the formation of the glossy patina.

<sup>1</sup> *Indian Prehistoric and Protohistoric Antiquities*, p. 36.

<sup>2</sup> De Terra and Paterson, *Studies on the Ice Age in India and Associated Human Cultures*, p. 311.



Coggin Brown in his *Catalogue of Prehistoric Antiquities in the Indian Museum* has noted the "lustre" or "tinting" of the paleoliths "due to the action of atmospheric agencies for long periods of time". Tinting and lustre however cannot be equated. Most of what he termed tinting would now be regarded as patination. Coggin Brown was also careful to note the colour of the quartzite from which the tools he described were manufactured. These are:—

Brown-----Reddish; yellowish

Green-----Slatey.

Grey-----Bluish; light and dark; reddish

Purplish.

Except in the freshest specimens, the original colour can seldom be seen unless the tool is broken, or thin flakes or bits are struck off. The natural colour grows duller as the crust or patina is being formed on the flake-scars. The process of formation of the crust in quartzite pebbles and boulders must obviously be the same as in the tools made of the same material. The study of the crusts in an assemblage of broken tools and pebbles gives us a good deal of interesting information on the question of patination.

The outside of a pebble or a patinated tool of quartzite gives, as a rule, very little indication of the colour of the material within. A small pebble in my collection, fractured and showing a nearly full cone of percussion, has a greyish blue core, but the pebble surface is light coffee-coloured. The crust nearest the core is yellow through which the blue of the core shows itself; there is next an intermediate zone of reddish brown, and over that one of yellowish brown. In some portions the last is missing, though superficially the whole of the pebble is of a uniform colour.

In another piece of pebble with a slate-coloured core, the pebble surface is light yellowish brown and the crust is of nearly the same colour, but tending to be darker towards the periphery.

Two pebbles with purple cores have, one of them, a purple and black surface, and the other, the more usual brown surface. In the former there is virtually no crust, and the pebble shows on its surface the original colour of the quartzite. The crust in the latter is nearly whitish nearest the purple core, growing darker outwards where it is first yellowish and then yellowish brown.

The most remarkable kind of crust noticed is that of a tool which, on the surface, is of a dull yellow colour with patches of dirty grey. The quartzite of which this tool was manufactured is light purple. Deeper layers of the crust which is three to four millimetres thick, are of whitish colour with the slightest tinge of yellow.

Very little is known of the chemistry of the change of colour of quartzite to whitish yellow, yellow and brown.<sup>1</sup> These crusts are often hard, though in the case of tools exposed on beds of detrital laterite, the quartzite is reduced to the condition of loosely held sand.

<sup>1</sup> The colloidal silica will, it is well known, be easily dissolved by alkaline solutions and the loss of the cementing material will by itself produce slight changes of colour. In the matter of chert, Wayland believes that "patination never comes about without exposure". *Spolia Zeylanica* xi, 1921, p. 101.



A whitish patina occurring on the pebble-tools described below (pp. 13-14) has its parallel in the tools from Vadamadurai,<sup>1</sup> a site in the Chingleput district, first described by Foote and King. The crust may be thin or even patchy. It may be due to the action of white clay on the quartzite of the artifacts. Many of the best Acheulian hand-axes and also the large numbers of the neatly flaked cores have a *deep brown* patina. Tools from Udayagiri area (sites K to M) usually have a *yellowish brown* patina. Dr. Manley informs me that there is nothing in the soil of this site to give the artifacts this particular tint, for which reason it seems likely that their patination is due to the same process that has produced the crust of a similar colour in the pebbles that were described in the previous paragraph. Tools that have been exposed to weathering in detrital laterite are usually stained red. A few tools like H<sup>2</sup>-3 (Plate III b), H<sup>2</sup>-23 (Plate V j) have superimposed on their brown patina patches of *dark grey*, which, at first, I thought might be due to lichens, but on closer examination were found to be of mineral origin. The nature of these patches requires further investigation.

None of the later tools, such as burins, blades or awls, have any patina worth the name.

### TYOLOGY.

Typological study of artifacts made of quartzite leads to less satisfactory results regarding the evolution of paleolithic craftsmanship than that of easily worked materials such as flint, for quartzite does not lend itself to delicate work.<sup>2</sup> In discussing Dr. Von Koenigswald's paleolithic finds near Pajitan in Central Java, Callenfels gives the useful caution that typology, especially in the Far East, is no reliable indication of age, and by way of illustration he cites the instance of a crude pebble *coup-de-poing* from Galumpong, Central Celebes, which appears Chellean typologically but is really not earlier than mesolithic.<sup>3</sup> Similar examples can be found in the Manley collection also. No. J-20 is a crudely flaked pebble tool that might easily be placed with the most primitive pre-Stellenbosch-like tools but for its extremely fresh appearance and the fact of its being the only tool of this type amidst others that are patinated. If typology were the only criterion of age, these patinated tools would have to be regarded as being later than J-20. Only when considered with technique and patination does typology give a reasonably sound basis for the study of surface collections such as the one now dealt with.

*Pebble Tools.*—The most primitive artifacts in the Manley collection are the pebble tools—choppers and hand-axes—which occur at several of the major sites. They are nowhere more than two or three per cent. of the finds. The line of demarcation between them and the Abbevillian *coups-de-poing* is arbitrary. In the following catalogue these pebble tools have been described as pre-Stellen-

<sup>1</sup> Coggin Brown. p. 31; De Terra & Paterson: *Studies on the Ice Ages in India*, pp. 328-329.

<sup>2</sup> See Burkitt's remarks on p. 61 of his "Prehistory".

<sup>3</sup> *Bull. Raffles Museum*. Series B. i, 1936. pp. 52 et seq.



bosch-like for the reason that the earliest tools of the latter culture are also of quartzite, and typologically their similarity to the Nellore tools is unquestionable. Moreover Prof. Van Riet Lowe has drawn attention to the possibility of a common origin of the quartzite cultures of Madras and those of South Africa.<sup>1</sup>

The pebble tools of Nellore, and those from the boulder beds of Vadamadurai described by Paterson, agree not only in typology, but even in the matter of Patination seen in such specimens as A. 430, 531 and 534. Several of the pebble tools have been weathered, and a few tinted by laterite, but only a very small number have any fresh look to suggest that they are late.

The best classification of the pebble tools is that based on the nature of the cutting edge, which is either broad or pointed and is, as a rule, formed by the intersection of the flake-scars on the ventral and dorsal sides.<sup>2</sup> But occasionally, as in specimens A-530 (Plate II a), and A-186, one face of the pebble may itself be flat, and this fact is taken advantage of. The flaking is then confined to the rounded face the cutting edge being formed by the flake-scars intersecting the level pebble surface opposite. Instead of a flat-sided pebble, a cleft half of a pebble may be similarly used. These split-pebble tools are usually thick and as striking platforms are seldom in evidence, it cannot be said that they involve a flake culture.

A-295 is a good example of the broad-edged variety. The cutting edge is formed by two large flake-scars on one face and a large scar flanked by two smaller ones on the other. In another tool of the same kind B<sup>1</sup>-23 (Plate II b) the cutting edge is very jagged, and one very large flake has been removed for the purpose of reducing the volume of the tool.

A-178 (Plate II c) is made on a split pebble. From the main scar one large flake has been struck off to reduce the thickness at the narrow end. From the opposite face, two large flakes have been removed first by contripetally directed blows from either side of the middle line, and after this two smaller flakes that have left roughly triangular flake-scars. The cutting edge remains still sharp.

O-21 is the only tool in this series made of quartz.

Of the second variety with the pointed working end, the best example is R<sup>1</sup>-53 (Plate II c) made from a longish pebble pentagonal in transverse section. Flaking has made it nearly conical, with one large flake-scar on the ventral face and two large and one small on the opposite face.

G-80 (Plate II d) which is made from one side of a pebble is half way between the two main varieties of pebble tools. The cutting edge is narrow, and is formed by the intersection of the pebble surface by the flake-scars on the opposite face. The pebble cortex has been removed from the butt region.

<sup>1</sup> ".....an entire assemblage of artifacts of the old stone age from Madras is laterally indistinguishable from one of Stellenbosch." Van Riet Lowe, *Illustrated London News*, April 29, 1933. The same impression is gained by all who have examined the series of S. African implements presented to the Madras Government Museum by the South African Bureau of Archaeology of which Prof. Lowe is the Director.

During early pleistocene times, there was direct land communication between Africa and India through Arabia, as is shown by the close resemblance between lower and middle pleistocene fauna of Africa and India.

<sup>2</sup> When describing "bifaces" the expressions "upper surface" "lower surface", etc., are convenient, but when tools have more than two sides, they lead to confusion. In using the terms "dorsal" and "ventral" for "upper" and "lower", I am following Prof. Van Riet Lowe. See "The Geology and Archaeology of the Vaal River Basin" Memoir No. 35. Geological Survey, Union of South Africa (Pretoria, 1935).



*Hand-axes, Cleavers, etc.*—These are of the usual Madras type. The cruder *coups-de-poing* of the Abbevillian facies are made from pebbles of suitable size. R<sup>1</sup>-46 (Plate II g) and G-2 (Plate II h) are crude hand-axes made from pebbles that have been flaked all over. The glossy patina of the former has already been referred to (p. 11). The flaking in these is more from the sides than from the ends of the pebbles, a tendency which is seen in the Pre-Stellenbosch type of tool, G-80 (Plate II d). Some of the hand-axes and cleavers are thin from their having been made of specially selected flat pebbles (A-10, A-301, for example). Split halves of pebbles also were very often selected for the manufacture of these tools. The thinnest hand-axes, *e.g.*, A-458 (Plate II i), and several choppers and cleavers were made from flakes. Bulbs of percussion can be seen in such specimens as A-108 where they have not been removed by subsequent flaking. The probable line of evolution is from round pebbles to flat ones, and from split halves to thinner flakes.

The best made hand-axes of the Acheulean type are thick-butted with tapering points *e.g.*, A-1 (Plate II j). The presence of the thick butt leaves very little doubt about the manner in which these tools were used. They were in all likelihood "hand-axes" in the literal sense of the term. Most of the rest of Acheulean hand-axes with sharp edges all round must have been hafted for use.

G-41 (Plate III a) and H<sup>2</sup> 3 (Plate III b) are typical and interesting hand-axes. In them, the two faces, dorsal and ventral, have been flaked in the usual manner, but the middle region of one of the lateral edges is left blunt and relatively thick to provide a hand-grip. The main working edge, therefore, is the side opposite the grip, particularly so in G-41.

There are a few hand-axes in which one of the faces is constituted entirely by the original pebble cortex. A-510 is a good example.

E-40 (Plate III c) is an extremely thin hand-axe made from a flake in which the ventral surface is formed by the main flake-scar, and the dorsal by the original pebble crust, the chipping being confined to the edges on the lower half of the tool.

A-208 (Plate III d) and K-27 (Plate III e) are special types of hand-axes in which the long flake-scars of the dorsal face more or less converge to a flat area in the centre of the upper half of this side. The flake-scars in the lower portion are very long, the working end of the tool being thin and nearly tongue-shaped.

In K-39 (Plate III f) the tool has an elongated pointed working end which is nearly triangular in section. It may have served as a lance-head.

The Vaal technique<sup>1</sup> is noticeable in A-93 (Plate III h) and A-520.

Cleavers are relatively scarce, though almost all the types known from such sites as Attirapakkam near Madras occur in the Nellore sites. Some of the cleavers have been made on the Vaal technique, *e.g.*, D. (Plate III k), and others from split pebbles, *e.g.*, U-1 (Plate III l).

<sup>1</sup> Attention was first drawn to the occurrence of this technique in South Indian stone tools by Burkitt (*Antiquity*, iv, 1930, pp. 327-339).



Some very shapely hand-axes and picks are made of quartz which has been usually regarded as the most unsuitable material for the manufacture of such tools.

A-100, G-84, and H<sup>2</sup>-73 are well-made discs.

A-251 (Plate IV d), A-179 (Plate IV f), H<sup>0</sup>-28 (Plate IV a) and H<sup>2</sup>-15 (Plate IV b) are choppers with thick straight butts and broad cutting edges. The last of these is made of whitish quartzite. H<sup>0</sup>-28 has blunted sides and the butt has a concavity. A-511 (Plate IV c) is an extremely thin chopper.

N-71 (Plate IV e) is chopper made from a flat pebble. But for its fresh look and finer flaking, it might easily pass for one of the pebble tools of the earlier series.

*Cores.*—The artifacts described as cores are, most of them, not rejects, though it is difficult to guess their use. A-515 (Plate III g) for example is extremely well-made, and would not have been manufactured to be lost after being used once or twice as a sling-stone<sup>1</sup>, or as a simple missile thrown by the hand. The majority are small in size being less than three inches along their longest axis. The best made specimens such as A-120 have a roughly diamond-shaped cross-section and are chipped symmetrically on both faces, the flake-scars of opposite sides alternating and giving the edge a zig-zag appearance. B<sup>2</sup>-7, B<sup>2</sup>-28, D-3, D-5 and H<sup>0</sup>-12 are flat and worn. In D-3 and D-5 there is an evident tendency for the chipping to be confined to the edges, leaving unflaked regions on one or other of the faces. In others, G-91 for example, one of the faces is left unflaked. A-459 and A-514 are more or less conical in shape, the fine flake-scars in the latter converging like flutings to the point of the cone. H<sup>2</sup>-60 is a good example of an elongated coroid, ventrally flat, with bold flaking and a small area of the crust of the pebble remaining at the top.

*Scrapers, Blades, Diminutive Hand-axes, Axiels and Burins.*—Most of these are made from flakes which can generally be described as Proto-Levalloisian. The striking platform is either a flat level portion of the pebble surface (A-456), or a flat flake-scar that makes an obtuse angle of 110° to 130° with the main flake-scar. Some of the blades have more or less right-angled striking platforms, but these are very rare. Few of the flakes are of any considerable size, the largest of the blades being about 14 cm. long. The exception to this general rule is found in the case of a small number of heavy semi-lunar flakes such as A-111 (Plate IV g) and A-573. The first has a large plain striking platform, the angle of which is about 95°. Two-thirds of its dorsal face is constituted by the original pebble cortex and the remaining third by a large flake-scar. The cutting edge is formed by the intersection of this last with the main flake-scar. The other two artifacts are made in the same manner as the first, but in A-573 the striking platform is not artificial, a level part of the pebble surface having been used for that purpose.

<sup>1</sup> The question has been asked by A. Logan: Why should a worked core be used as a sling-stone instead of the more readily available pebbles? A discoidal core such as No. A-517 is likely to be more lethal than a round pebble especially if projected by the unaided hand.



The scrapers have been classified roughly into three groups—hollow scrapers, side-scrapers and end-scrapers.

The hollow scrapers are made from cores or from flakes fashioned in the same manner as the hand-axes except for a concavity, invariably on the right side, where by bold flaking a bevelled edge is produced. This concavity is pronounced in some tools, for example H<sup>2</sup>-47 (Plate IV k) and V-27 (Plate IV h).

A special sub-division of the group of hollow scrapers is formed by the four specimens, A-437 (Plate IV j) B-23 (Plate VI e) H<sup>0</sup>-7 and H<sup>2</sup>-84. These are nearly straight-sided right-angled flakes with a hollow opposite the angle. The hollow is made by fine flaking. These tools would have made good spoke-shaves.<sup>1</sup>

A-569 is a hollow scraper of quartz.

The side-scrapers are mostly flake tools the usual shape being semi-circular or triangular. They have fine retouch along the edges, which is specially noticeable in A-436 (Plate V d). and B<sup>2</sup>-59 (Plate V b). Where retouching is absent the edges are bevelled by well-regulated flaking. A semi-lunar scraper in this series, A-72, has its exact copy in the collections from Attirampakkam in the Madras Museum.

G-37 is a quartz side-scraper on a core.

Of end-scrapers a typical example is H<sup>2</sup>-(Plate V g) made of bluish green quartzite. It is a somewhat thick flake the median transverse section of which is an isosceles triangle. The butt retains the brownish cortex of the pebble. The working end has minute retouch. Its resemblance to the duck bill scrapers is very great. D-19 (Plate V a) has a fan-shaped working end, the narrow flake-scars radiating from the thicker butt to the margin. U-77 and 4-10 are other good examples. These end-scrapers form undoubtedly a distinct class by themselves.

The blades are on the whole crude on account probably of the toughness of the material used in their manufacture. A-70, the only parallel-sided blade found, must have required a superlative degree of skill in flaking to strike it off from a core. Such flakes are therefore extremely rare. In A-70 the striking platform has an angle of nearly 100° and there is retouching along the edge on the main flake-scar side. In A-89 the striking platform is on the back of the blade. The average length of the blades is from two to two and a half inches. The usual shape is comparable to that of the modern South Indian bill-hooks or choppers of iron, cf. 29-4 (Plate V f) which is a beautiful blade of clear quartz.

Diminutive hand-axes appear to be the end-products of the evolution of the *coup-de-poing*. They are too small to have been used for digging, etc., as the latter were probably used. Their function must remain a problem for

<sup>1</sup> The concave scrapers of the Tasmanians (*Journ. Anth. Institute*, xxx, pl. xxvi) bear close similarity to the spoke-shaves described here. The Tasmanian awls referred to in Tafel VII of Menghin's *Weltgeschichte* have some likeness to the awls described below (p. 18). The cultural similarity indicated here may be significant in view of the possibility of the racial similarity of Tasmanians to the authors of the paleolithic culture of India, for it is well known that there is a Melanesian and Proto-Australoid strain in the present population of South India.

See also H. Ling Roth, *The Tasmanians*, 2nd edition (1899).



the present. The more pointed ones among them were probably used as spear-heads, but others that are oval and finely flaked all round were obviously intended for some other purpose. As in the case of the larger hand-axes the smaller ones also are sometimes core and sometimes flake tools. Stepped flaking is a feature of several of them. It appears that whenever drastic reduction of the material was desired by the "Quartzite men" they had recourse to step-flaking. Good examples of the diminutive hand-axe are A-264 (Plate VI j) and O-8 (Plate VI l).

Awls (Plate VI a-d) are either flake or core tools that have fine and often moderately long points. A-29 (Plate VI b) A-410 (Plate VI c), F-45, G-76 and J-56 are of quartz. A-551, A-28 (Plate VI d), A-30, A-29 (Plate VI b), and B-39 are small round pebbles or flakes that have sharp snout-like points. A-255 (Plate VI g) is a typical example of a series of fine tools with long awl-ends.

Very few of the burins can be said to be well-made. A-27/1 and A-26/2 (Plate VI f) have the characteristic graver point. The chert tool A-27 (Plate V i) also has very fine point. I0-13 (Plate VI h) is made of a thin quartz flake the graver facets of which meet at a rather wide angle. F-5 (Plate VI i) is made from a thick flake in which the point is produced by a straight flake removed from the lower margin and two or three others on the upper. The working end is, however, coarse.

*Special Types of Tools.*—A-142 (Plate V p) is a flake "point" 8.2 cm. long with a sharp working end that has been got by removing two thin flakes from near the tip from the face opposite the main flake-scar. The edges of the flake beyond the tip area have been battered, probably to facilitate hafting. Similar "points" have been made from thin flakes by a series of stepped flake-scars, e.g., A-544.

A-560 (Plate V n), G-20, and J-36 (Plate V o) are multiple utility-tools—combined boring and cutting tools—that demonstrate the great excellence attained by the palaeolithic craftsmen of the Nellore area. They are made from thin semi-circular flakes, the arched side of which forms the "back", the straight side the cutting part, and a prolonged nose at one of the angles the boring end. J-15 is a rather crude implement of the same facies.

H<sup>2</sup>-23 (Plate V j) is an aberrant tool which appears to have been intended as a knife. It is made from a longish oval pebble. The ventral face is very little worked. A large oblique flake-scar on the lower half of the left side produces a blade-like cutting edge, the lumpy upper half of the pebble serving as a sort of handle.

J-16 (Plate V l) is another rare kind of implement made on a crescentic flake thick along the outer margin and becoming thinner inwards. The ventral face is the main flake-scar; dorsally, transverse flake-scars meet on a median ridge running parallel to the sides. The thicker outer side, which is ventrolaterally placed, is also transversely flaked. Crescent-shaped natural flakes are occasionally seen in the field, and it is possible that one such was used in the manufacture of this tool. It might have been hafted as a pick.



Q-4 (Plate V k) is another pick or axe-head made from a thick core on one side of which the original pebble surface is seen. It looks almost like a neolithic celt which it may in all probability have been, but it is different from the usual type of South Indian celts. The pebble cortex is unworked. The face opposite is so smooth that no sign of flaking remains. A kind of shoulder has been provided by rounding both the lateral margins slightly above the middle. The cutting edge is thick.

W-1 (Plate V m) is a lance-head resembling the stemmed point, made from a thin flake with a nearly right-angled striking platform. The dorsal face constituted by the pebble cortex is unworked except where the flake is narrowed down to form the stem. The bulb of percussion can be seen on the ventral side.

### CONCLUSIONS.

The generalisations that can be made from the present study can be only of a tentative character. The typologically most primitive artifacts (Lower Paleolithic series), namely the pebble tools of the Pre-Stellenbosch facies, form numerically only an insignificant part of the whole collection. In this respect they present a contrast to the Soan Valley culture where such pebble tools are numerous. The hand-axes which come next to the pebble tools are the most predominant tool type in the Nellore district both in their numbers and the skill exhibited in their manufacture. The oldest-looking among these hand-axes are made from cores. A well-defined flake technique makes its appearance only later, manifesting itself particularly in the cleavers and the Vaal type of hand-axes. The thin flake hand-axes are generally less patinated—and presumably of a later date—than even the cleavers.

The inference that the earlier phases of the hand-axe culture was not influenced by flake techniques is supported to some extent from certain cultural and geographical considerations about the Udayagiri site. As pointed out on p. 10, this area is a marginal tract in the distribution of the lithic cultures of the district, and its mountain fastnesses are away from the highways likely to have been used by the men of the Old Stone Age. The technique here did not proceed beyond the early Acheulean, and flake tools are absent. At Udayagiri, there existed a pure unmixed hand-axe culture, which would be impossible if, from the very beginning, the flake and core cultures were inextricably mingled.

The Upper Paleolithic culture is represented by definite classes of special tools designed for special purposes. No previous collector in Southern India has been as successful as Dr. Manley in the matter of these later artifacts which, on account of their small size, have a tendency to disappear or to escape notice. Nellore is not far from the great Neolithic centres on the western side of the Ghats; this fact may also explain why artifacts leading to the final stage of the Stone Age cultures have been found in this district in greater numbers than in others to the north or the south.



## CATALOGUE OF ARTIFACTS.

All the artifacts are of quartzite unless specified otherwise. Those assigned in the division under the Treasure Trove Act to Dr. Manley are indicated by asterisks. Measurements are given in centimetres.

## SITE A.

Field No.	Type.	Size and shape.	Condition.	Description.
A-295	Pebble tool. Cf. Pre-Stellenbosch type.	10.5 × 9.4 × 5.1 Roughly triangular; thick.	Not rolled, but weathered.	End of a pebble. Chipped on the lower half of the dorsal and ventral surfaces. Edge broad, jagged and blunted.
*A-178	Do.	10.1 × 9.0 × 6.2 Nearly circular; thick.	Cf. above. One side tinted by laterite.	Made from the cleft half of a pebble. Flaked on the dorsal surface, the flake-scars of which intersect the main flake-scar opposite. Plate II(e).
A-530	Do.	11.5 × 8.4 × 5.4 Triangular; thick.	Not rolled	Ventral surface of the pebble flat. Worked on the dorsal surface, the flake-scars of which intersect the pebble surface to form the cutting edge which is broad and straight. Plate II(a).
A-532	Do.	11.8 × 9.5 × 4.1 Oval; thin.	Not rolled. One side tinted by laterite.	More worked than the three above. Flaked on both faces. Edge regular.
*A-13	Do.	10.9 × 8.5 × 6.6 Pear-shaped; thick.	Not rolled	Three large flake-scars on the dorsal surface, and a few smaller ones on the ventral surface. The flake-scars are nearly convergent.
*A-186	Do.	10.1 × 10.4 × 4.6 Squat triangle; thin.	Unrolled; fresh	Crude stepped flaking. Ventral surface of the pebble being flat is left unflaked. Flake-scars directed to the pointed end.
A-536	Do.	9.8 × 8.8 × 3.5 Roughly pear-shaped.	Do.	Flaked only on the lower half of the dorsal surface, as in the above, but less pointed.
*A-430	Do.	8.9 × 8.5 × 5.5 Triangular; not thick.	Not rolled, but weathered. Has whitish patina like the tools of the boulder conglomerate of Vadamadurai.	More worked, very little of the pebble cortex remaining at the butt end. Pointed, the flake-scars being convergent. The flatter dorsal surface smoother. Right edge battered. Some crude stepped flaking.
*A-531	Do.	9.6 × 7.8 × 4.3 Triangular; thin.	Cf. above. The whitish crust is thicker.	On account of the weathering, the flake-scars are not clear. The pebble crust at the butt flakes off. The business end not pointed, but narrow and arched.
A-534	Do.	7.0 × 6.6 × 3.9 cf. A-536	Do.	Made from a small pebble. Flaked on both faces, but the dorsal flake-scars crude and stepped. The working end is nearly pointed, but blunted.
A-440	Do.	11.7 × 8.5 × 4.0 Roughly oval.	Weathered and slightly rolled.	Made from a split pebble. Only the end is chipped dorsally to a point.
A-508	Abbevillian hand-axe.	14.7 × 8.2 × 5.4 Pointed oval, thick, & heavy.	Unrolled	Made from a pebble. The original pebble surface remains over a large part of the butt. Flaked from the sides. Tip nearly pointed.
*A-507	Do.	13.9 × 9.3 × 7.1 Oval.	Unrolled, but weathered.	Thick butt. Longitudinal flakes on the dorsal surface, and a few from the sides also.



Field No.	Type.	Size and shape.	Condition.	Description.
A-15	Abbevillian hand-axe.	11.7 x 7.2 x 5.0 Pointed oval.	Weathered; laterite tinted.	Thick at the butt, where the original pebble surface is seen, as also on the ventral side. Flaked chiefly from the sides. Pointed and very thin due to stepped flaking.
A-311	Do.	11.1 x 6.6 x 4.2 Pointed oval.	Slightly weathered.	Made from half a pebble. Flaked on the dorsal face only. Moderately sized flake-scars.
*A-280	Do.	10.7 x 6.6 x 4.4 Pointed oval.	Fresh.	Made from a pebble. Very crudely flaked. Edge jagged.
A-535	Do.	9.0 x 7.3 x 4.0 Pear-shaped.	Rollled & weathered; deeply tinted by laterite.	Pebble-butted. Flaked from the sides. Edges nearly straight.
A-226	Do.	9.3 x 7.5 x 4.9 Pear-shaped; thick.	Rollled & weathered.	Pebble-butted. Flaked from the sides. Thin, pointed working-end.
*A-12	Do.	13.8 x 8.9 x 4.6 Irregular.	Fresh.	Broken. Partially finished tool.
*A-448	Do.	8.2 x 5.3 x 4.6 Roughly ovate.	Not rolled; slightly weathered.	Small tool. Flaked towards the thick butt.
*A-174	Do.	11.6 x 8.6 x 3.8 Oval; not thick.	Unrolled, but slightly weathered.	Flaked all round the edges, the artifact being thickest at its middle; flaking free and crude. Thin, almost pointed business end.
A-446	Do.	10.0 x 7.2 x 4.0 Oval.	Do.	Similar to the above. Very crudely flaked.
*A-210	Do.	13.3 x 7.9 x 5.3 Oval.	Unrolled; weathered; yellowish tint.	Flaked almost all round. Section across the middle is almost rhomboidal. Edge nearly straight.
A-368	Abbevillian-Acheulean fabricator(?)	9.5 x 7.7 x 6.1 Roughly conical; thick.	Fresh.	A thick-butted tool, with the pebble surface on the butt. Flakes removed in such a way that the scars converge to a narrow point. The implement is roughly pentangular in section. The flaking is Acheulean.
*A-317	Abbe-Acheulean hand-axe.	6.4 x 5.1 x 3.9 Roughly conical; thick.	Do.	Pebble surface at the butt. Long thin flakes on the upper face, smaller ones across on the lower face.
*A-427	Do.	7.5 x 6.5 x 3.8 Oval.	Unrolled, but only slightly weathered.	Pebble-butted. Flaked from the sides. Edges somewhat sinuous. Point, blunt and thick.
A-5	Do.	12.1 x 8.5 x 4.1 Oval.	Unrolled, slightly weathered.	Flaked except at the butt. Section very thin. Edge not quite straight though the tool is thin, and flaking controlled.
A-179/1	Do.	12.2 x 8.6 x 3.1 Tongue-shaped; thin.	Unrolled.	Flaked to thinness. Straight and flat ventrally, only thin long flakes having been removed along the edges. Dorsal surface has long thin flake-scars. Pebble cortex seen at the thin butt.
*A-241	Do.	11.1 x 7.5 x 3.4 cf. above.	Do.	Cf. above, but flaking is somewhat crude. Ventral surface completely flat.
*A-236	Do.	12.0 x 9.7 x 3.9 Roughly triangular; thin.	Unrolled, but slightly weathered.	Pebble butt. Pointed tip broken. Crude step-flaking. Edges zig-zag, though the flake-scars are thin.
*A-4	Do.	12.5 x 9.0 x 3.2 Pear-shaped; thin.	Unrolled.	Very little of the pebble cortex remains at the butt. Reduction of thickness by step-flaking on both faces. Sides look battered.



Field No.	Type.	Size and shape.	Condition.	Description.
*A-222	Abbe-Acheulean hand-axe.	10.1×6.4×3.6 Triangular; thick; triangular in section.	Unrolled	Flaked all round leaving no pebble cortex. Ventral surface flat. Crude flaking dorsally.
*A-16	Do.	10.3×6.6×4.0 Pyri-form.	Do.	Pebble-buttet; controlled flaking. Edges nearly straight. Tip thin.
A-11	Do.	12.2×6.8×4.5 Elongated oval.	Do.	<i>Cf.</i> above, but the flake-scars are directed to the middle line from the sides. Edges not so straight as in the above.
A-513	Do.	9.3×5.8×3.3 Ovate	Unrolled; fresh looking.	Chipped all round. Tip broken. Step-flaking.
A-7	Do.	13.6×8.0×2.9 Elongated ovate; thin.	Unrolled	Thin tool. Dorsal surface has large longish flake-scars. On the ventral surface the flaked surface has split off except near the tip.
*A-195	Do.	13.3×8.6×3.8 Asymmetrical; oval; thin.	Unrolled; weathered; tinted by laterite.	Butt still has a small area of the original pebble surface. Tip thin, broken. Dorsal surface flat; edges show small stepped flake-scars. Ventral surface has large flake-scars. Edges almost straight.
A-6	Acheulean hand-axe.	14.2×10.0×4.5 Ovate	Unrolled; tip broken	Flaked all round, only a small area of the pebble surface remaining. Flake-scars all directed to the middle line. Typical S-twist of Acheulean tools.
*A-1	Do.	17.3×9.6×5.2 Elongated oval.	Unrolled; slightly weathered.	A portion of the butt still unflaked. Fine flaking and some secondary stepped flaking near the edges. The maximum thickness is near the butt. Plate II(j).
A-168	Do.	8.3×6.2×2.7 Elongated oval.	Unrolled; slightly weathered; tip broken.	Chipped all over. S-twist. Fine workmanship.
A-510	Do.	12.2×8.8×2.6 Oval; very thin.	Unrolled	Made from a large thin flake. No flaking on the ventral surface which is the main flake-scar. The dorsal surface has been chipped towards the tip, the rest being the original pebble surface.
A-136	Do.	10.4×8.2×4.0 Ovate	Do.	Somewhat thick. Original pebble surface is seen under the butt end which itself is thin and sharp. Secondary stepped flaking on the edges on the sides and the tip.
A-178/1	Do.	10.8×8.8×4.1	Weathered & worn. More weathered ventrally.	Made from the side of a pebble. Thickest at the centre. Original pebble cortex on the lower right half dorsally. Some stepped flake-scars and several thin ones.
*A-509	Do.	10.3×6.4×2.9 Tongue-shaped; thin.	Unrolled	Flaked all round. Fine secondary working.
A-238	Do.	11.4×6.6×4.0 Ovate	....	Quartz. The butt is thick. But the edges are thin and the end sharp. The flaking is coarse, as also is the material.
A-398	Do.	8.0×7.0×4.0 Broad oval; thick.	Broken	Quartz. Edges nearly straight.
A-3	Do.	13.6×8.8×4.2 Pointed oval.	....	Quartz. A well-made tool. Edges nearly straight. Sharp all round. Point with a median rib.



Field No.	Type.	Size and shape.	Condition.	Description.
*A-139	Acheulean hand-axe.	10.4 × 8.6 × 4.0 Pointed oval.	Broken tip . .	Quartz. Very coarse.
A-224	Do. .	8.5 × 6.3 × 4.3 Pointed oval.	Do. . .	Quartz. Thick at the butt.
*A-2	Do. .	13.8 × 7.6 × 4.6. Pointed oval.	Do. . .	Quartz. A fine tool; straight edges; symmetrical.
*A-197	Do. .	9.4 × 6.2 × 3.6 Pointed oval.	....	Coarsely worked.
A-132	Do. .	9.3 × 8.6 × 3.5 Triangular.	Unrolled . .	Bluish quartzite. Made from a thick flake. The main flake-scar forms the ventral surface. The butt end and the dorsal surface show the original pebble cortex. The sides have rough step-flaking. The edges are zig-zag.
*A-91	Do. .	8.8 × 7.7 × 3.3 Ovate .	Unrolled; tinted by laterite.	Tip broken. Step flaking. Sharp all round.
*A-185	Acheulean hand-axe on flake.	9.3 × 7.5 × 2.5 Roughly triangular; very thin.	Slightly rolled and weathered.	Butt formed by the original pebble end. Ventral surface flat. So also the dorsal surface. The two sides are trimmed, so that the transverse section is a parallelogram.
*A-18	Cleaver (Flake tool)	15.0 × 11.2 × 4.1 Bell-shaped in outline.	Weathered . .	Heavy material. Made from a flake. The dorsal surface formed by the original pebble cortex. Sides worked as also the butt which is arched and at an angle to the plane of the main flake-scar. Cutting edge convex.
*A-18	Do. .	12.0 × 8.8 × 3.8 Trapezoid.	Not weathered or rolled.	Butt somewhat oblique and formed by the original pebble surface. Cutting edge nearly straight. Ventral surface formed by a large flake-scar, the bulb being visible on the right side. The dorsal surface formed by some crude stepped flake-scars.
A-19	Do. .	13.2 × 8.3 × 3.3 . .	Do. . .	Pointed butt, straight cutting edge and arched sides. The ventral main flake-scar is chipped to reduce the thickness of the butt and side. The dorsal surface more worked.
*A-20	Do. .	13.4 × 8.2 × 4.0 . .	Weathered . .	<i>Cf.</i> above. The bulb of percussion on the ventral surface is still seen. Cutting edge not quite straight.
A-112	Do. .	11.9 × 11.3 × 4.8 . .	Slightly weathered .	A stumpy cleaver. Flat, oblique butt, nearly parallel to the cutting-edge. Ventral surface formed by the large main flake-scar, but the bulb is not seen as that area has been chipped. Dorsal surface shows the original pebble cortex. Chipped laterally to reduce the thickness of the butt.
A-301	Cleaver from a pebble.	12.8 × 10.0 × 4.1 Roughly oval.	Not rolled; somewhat weathered.	Butt formed by the original pebble end. Dorsal surface flaked on the sides. Ventral surface nearly flat by fine flaking. Cutting edge oblique. This cleaver is very much like some of the thin hand-axes.
A-10	Do. .	12.2 × 9.8 × 3.9 Oval .	Do. . .	<i>Cf.</i> above. But more flaked on both faces and looks more like a hand-axe than A-301.



Field No.	Type.	Size and shape.	Condition.	Description.
*A-595	Cleaver on flake	11.2 x 9.2 x 4.4 Oval	Not rolled; somewhat weathered.	Unfinished tool. Butt oblique and has the original pebble surface. Dorsal surface formed by the pebble cortex in the middle; flaked along the sides. Ventral surface formed by the main flake-scar, on which the bulb is still seen. The butt formed the striking platform which is at about 100° to the plane of the main flake-scar.
A-108	Do.	11.4 x 7.2 x 3.7 Oval	Do.	Thick, arched, prepared butt end, which served also as the striking platform. Ventral surface entirely formed by the main flake-scar. Dorsal surface formed by one large, and a few smaller flake-scars. Cutting edge narrow and arched.
*A-121	Cleaver on pebble	8.4 x 5.6 x 3.3 Roughly rectangular.	Not rolled	Butt formed by the pebble end. Dorsal surface formed by three or four longitudinal flakes; the ventral by five convergent flake-scars. Cutting edge nearly straight.
*A-304	Cleaver	10.7 x 8.1 x 3.7 Nearly parallel-sided.	Do.	Butt formed by the oblique pebble surface. Cutting edge somewhat arched. Dorsal and ventral surfaces formed each by a large flake-scar, the former flanked by flake-scars which constitute the sloping sides. The transverse section, therefore, is roughly trapezoid.
A-227	Diminutive cleaver	8.7 x 3.0 x 3.3	Not rolled; slightly weathered.	Butt and dorsal surface formed by the original pebble cortex. Cutting edge formed by the intersection of the main flake-scar on the ventral surface and the dorsal pebble surface. Sides formed by longitudinal flakes. Transverse section is a rough parallelogram.
A-?	Cleaver	11.9 x 7.6 x 3.7 Roughly rectangular outline.	Laterite tinted	Butt formed by the original pebble surface, ventral surface by the main flake-scar. Bulb flaked off. Altogether crude.
A-425	Cleaver (?)	12.0 x 8.9 x 2.7 Trapezoid.	Not rolled; weathered	Thin flake, roughly chipped, edges battered.
*A-105	Do.	10.9 x 9.3 x 3.8	....	
A-713	Do.	9.9 x 7.4 x 3.3 Inverted U-shaped.	Worn. Cutting edge broken.	Both dorsal and ventral faces are made by large flake-scars, and the sides and upper end further flaked. The tool is concavo-convex.
A-503	Discoidal coroid	7.3 x 9.9 x 3.6	Unrolled; slightly weathered.	Small flakes removed. Some stepped. Alternate flaking not definite.
*A-321	Do.	8.4 x 7.8 x 3.9	Do.	Pebble cortex on one face.
A-120	Do.	8.9 x 8.1 x 4.5	Do.	A small area on the apex of the dorsal side has the pebble cortex. Alternate flaking. Bluish quartzite.
*A-460	Do.	7.3 x 6.8 x 3.7	....	
A-542	Do. thin	6.1 x 5.5 x 2.3	Unrolled; slightly weathered.	Fine thin-flaking. Some stepped flake-scars.
*A-549	Do.	6.1 x 5.3 x 2.4	Weathered	
*A-113	Do.	7.8 x 5.3 x 3.2	Slightly rolled	
A-271	Do.	5.4 x 4.5 x 2.8	Unrolled	Thick. Edges battered.



Field No.	Type.	Size and shape.	Condition.	Description.
*A-550	Discoidal coroid	6.5 x 5.2 x 2.5	Weathered	Irregularly flaked.
A-332	Do.	4.7 x 4.4 x 2.5	Not weathered	Ditto.
*A-557	Do.	6.5 x 5.3 x 2.5	Slightly weathered	Pebble cortex on one face.
A-512	Do.	7.0 x 5.6 x 2.8	Not weathered	Irregularly flaked. Majority stepped flakes.
*A-548	Do.	5.6 x 5.5 x 2.5 Thin	Weathered	Fine flaking.
A-293	Do.	6.3 x 5.8 x 3.7 Not thin	Not weathered	Stepped flakes. Irregular.
A-148	Do.	6.7 x 5.4 x 2.4 Thin	Do.	Pebble cortex on one face.
*A-153	Do.	6.3 x 5.5 x 3.4	Slightly weathered	
A-127	Do.	7.9 x 6.2 x 4.6	Do.	Irregularly flaked.
*A-505	Do.	6.0 x 6.0 x 3.6	Do.	Fine flaking.
*A-516	Do.	8.8 x 7.9 x 3.9	Do.	
A-517	Do.	6.2 x 5.5 x 3.4	Fresh	Quartz.
A-406	Do. (?)	5.3 x 4.4 x 2.2	Weathered	An odd bit.
*A-128	Do.	5.5 x 5.4 x 2.1 Thin	Worn	
A-515	Do.	7.0 x 6.2 x 3.2	Weathered and worn, particularly on one side.	Fine alternate flaking. Plate III(g).
*A-373	Do.	6.8 x 6.1 x 3.8	....	Irregular. Broken.
*A-180	Do.	10.0 x 9.0 x 3.4	Weathered very much	More worked on the dorsal face.
*A-520	Elongated coroid	7.4 x 5.6 x 2.5	Weathered	Irregular flaking.
*A-394	Do.	7.0 x 5.5 x 3.7	Slightly weathered	Ditto.
*A-201	Do.	8.1 x 6.7 x 3.2	Do.	Ventral face retains the original pebble cortex. Nearly vertical flakes along the sides.
*A-533	Do.	9.9 x 5.5 x 3.9	Not weathered	Very irregularly and roughly flaked.
*A-316	Do.	7.4 x 6.6 x 4.1	Do.	Ventral face retains the pebble cortex; dorsally flake-scars meet on a median ridge.
Unnumbered.	Do.	10.6 x 8.3 x 4.5	Slightly weathered	Bold flaking.
*A-512	Do.	9.4 x 6.7 x 3.8	Do.	May be a badly finished hand-axe.
A-473	Do.	9.8 x 6.1 x 3.7	Do.	Ditto.
A-439	Do.	9.0 x 6.3 x 3.9	Much weathered	Ditto.
A-457	Do.	9.8 x 7.6 x 2.9	Not weathered	Side of a pebble. Ventral surface retains the original pebble cortex.
A-444	Do.	8.0 x 5.9 x 3.4	Slightly weathered	Corner of a pebble. Almost like a core-scraper.
*A-97	Do.	8.6 x 6.1 x 3.7	Weathered	Pebble surface remains on one half of the ventral face.
A-555	Do.	6.7 x 5.2 x 2.6	Weathered; laterite tinted.	Corner of a pebble. Ditto.
*A-463	Do.	6.0 x 4.8 x 2.4	Slightly weathered	Ditto.
A-570	Do.	6.4 x 3.9 x 2.7	Do.	Irregularly flaked.
A-411	A lumpy core	4.8 x 4.3 x 4.0	Do.	



Field No.	Type.	Size and shape.	Condition.	Description.
*A-256	Hand-axe . .	8.8×7.7×2.6 Thin; disc-shaped.	Slightly weathered .	Made from a flake. A few large but thin flakes removed from the dorsal face, but a part of the original pebble surface still remains.
*A-182	Do. . .	8.5×8.2×3.1 Disc-shaped.	Tinted by laterite .	Chipped all over. Some stepped flakes.
A-100	Do. . .	11.0×9.9×4.2 Not thin	Weathered and the crust on the lower face cracked.	Made from a thick flake. A few bold flake-scars on both faces. Edges battered. Re-chipped.
A-220	Do. . .	8.4×7.9×2.7 Thin .	....	Quartzite with large grains. Crudely flaked. Edges blunt on two sides, but sharp in the remaining regions.
*A-95	....	7.6×6.1×2.3 Thin .	Not rolled . .	
A-239	....	9.7×8.1×2.6 . .	Not rolled; tip broken.	Made from a large flake. Stepped flakes on the face opposite. The main flake-scar practically unworked.
A-199	Acheulean chopper	8.0×7.7×3.8 Nearly rectangular.	Very slightly weathered.	Pebble-butt. Very thin flakes have been removed to give a broad straight cutting edge. These choppers may be regarded as having evolved from the pre-Stellenbosch type of pebble-tools with broad cutting edges. All these acheulean choppers have a nearly straight pebble butt, and are squat in appearance.
*A-200	Do. . .	7.9×7.1×3.2 . .	Do. . .	Butt at right angles to the upper and lower faces. The entire butt retains the original pebble surface. Two bands of quartz run transversely across the tool.
A-251	Do. . .	8.4×7.9×4.3 . .	Highly weathered and somewhat rolled. Lateritised crust of dark grey colour.	( <i>Cf.</i> above. Thicker. A few stepped flake-scars. Plate IV(d).
*A-396	Do. . .	9.6×8.9×3.3 Squat oval; thin.	Weathered . .	Pebble-butt. Very thin. The two faces are very flat as large thin flakes have been struck off. The cutting edge is formed by the intersection of the dorsal and ventral flake-scars. This tool, therefore, resembles the cleaver and also the hand-axe.
*A-474	Do. . .	6.9×6.8×2.2 . .	Fresh . . .	Pebble-butt. The cutting edge nearly like that of a cleaver.
A-511	Do. . .	7.1×6.0×2.1 Semi-circular.	Do. . .	Thick crust of the original pebble forms the butt. Arched cutting edge. Plate IV (e).
A-179	Do. . .	13.0×8.0×4.5 Semi-circular.	Do. . .	Different from the rest in that the butt is very long, and extends not only opposite the cutting edge, but also on the left side. Secondary working along the chopper edge. Irregular chipping. Plate IV (f).
*A-372	Do. . .	6.2×5.3×2.5 Roughly trapezoid.	Slightly weathered .	<i>Cf.</i> A-474, above.
A-207	Do. . .	8.7×7.6×4.0 Roughly trapezoid.	Do. . .	Butt continuous with one of the sides of the tool. Cutting edge formed by large flake-scars intersecting.
A-149	Do. . .	7.6×7.2×2.5 . .	Do. . .	<i>Cf.</i> A-207.
*A-216	Do. . .	6.9×5.5×3.0 . .	Not weathered .	Pebble-butt. More or less like a broad-ended hand-axe.



Field No.	Type.	Size and shape.	Condition.	Description.
*A-391	Acheulean chopper	10.4 × 6.9 × 2.5 Elliptical; thin.	Weathered	Worked butt, at right angles to the dorsal and ventral faces. Large thin flakes removed. Working edge battered.
*A-110	Blade-like chopper	10.2 × 6.4 × 2.0 Thin	Fresh	Very thin flake. Cutting edge worked.
*A-489	Thin Chopper	7.3 × 5.8 × 2.3	Accretion of calcium carbonate.	Pebble-buttet. Straight, horizontal butt.
A-458	Thin hand-axe <sup>1</sup>	8.6 × 7.1 × 2.2 Very thin	Weathered	Made from a thin flake removed from a pebble. The thin butt has still the original pebble cortex. The ventral face formed entirely by the large main flake-scar, from the right side of which a longitudinal flake has been removed. The dorsal surface has a large flake-scar and two smaller ones all running longitudinally. Plate II(i).
A-400	Do.	10.2 × 6.9 × 1.1 Very thin.	Do.	Made from a thin flake. Dorsal face has the original pebble cortex; ventral face formed by the main flake-scar. Sides retouched.
*A-206	Do.	9.7 × 7.5 × 3.5	Slightly weathered	Pebble-buttet. Butt at right angles to the dorsal and ventral faces. Both the faces have very large main flake-scars, but near the pointed business end there is more of finer flaking. Sides battered, showing many stepped flake-scars.
A-204	Do.	9.2 × 7.4 × 2.5 Very thin. Ovate.	Very slightly weathered.	Made from a thin flake. Straight butt as in A-206. Ventral face has two large flake-scars; dorsal face has several, but all of extreme thinness.
A-465	Do.	9.9 × 7.1 × 2.6 Ovate	Weathered	Made from a flake. Ventral face entirely of the main flake-scar. Dorsal face has five or six flake-scars. Tip broken.
*A-475	Thin hand-axe on flake.	9.8 × 6.9 × 2.6 Oval	Weathered and rolled with an earth-coloured patina.	Made from a flake. Ventral face of one main flake-scar; dorsal of one large flake-scar and several smaller ones. One edge battered.
A-318	Hand-axe on core	9.2 × 6.7 × 3.7 Irregular.	Weathered and deeply tinted by laterite.	Pebble-buttet hand-axe, the technique similar to those of the choppers. Flakes of extreme thinness removed.
*A-122	Do.	9.7 × 7.2 × 3.5 Rhomboid.	Do.	Ditto.
*A-208	Victoria West type of hand-axe.	17.1 × 9.5 × 5.3 Lanceolate; parallelogram in section.	Weathered; slightly rolled.	Thick tool. Ventral face made of one large long flake-scar, and two or three smaller ones, which meet on a median longitudinal ridge. Dorsal surface made of five convergent flake-scars. Plate III(d).
A-93	Do.	9.5 × 6.3 × 3.7 Lanceolate; parallel-sided.	Do.	Somewhat similar to A-208, but the dorsal surface has one large flake-scar, and several smaller ones forming the flaked, sloping side. Plate III(h).
A-529	Do.	8.0 × 5.1 × 3.0	Do.	Similar to A-93.
A-541	Do.	9.4 × 5.5 × 3.0 Roughly oval.	Weathered; rolled	( <i>cf.</i> above two, but crudely flaked).
*A-545	Do.	10.5 × 5.9 × 2.8 Elongated oval.	Do.	Ditto.

<sup>1</sup> These thin hand-axes may be regarded as the end products of the evolution of the pointed pebble tools.



Field No.	Type.	Size and shape.	Condition.	Description.
A-404	Victoria West hand-axe, atypical.	9.0 x 5.3 x 2.5 Elongated oval.	Weathered; rolled.	
A-124	Do.	8.3 x 5.0 x 2.7 Roughly triangular.	Do.	The transverse section is not a parallelogram but a trapezium. Cleaver-like.
A-459	Core, Victoria West	7.4 x 5.5 x 3.9 Roughly pyramidal.	Weathered.	The core remaining after flakes have been struck off.
A-514	Do.	8.2 x 6.0 x 3.0	Slightly weathered.	Dorsal face pyramidal with several fine convergent flake-scars. The ventral face has one large flake-scar and several small.
A-160	Core	5.0 x 4.9 x 2.0 Truncated pyramid.	Weathered; rolled.	The edges of the main flake-scar which forms the ventral face are retouched.
A-580	Flake	6.7 x 6.1 x 1.6 Irregular, thin.	Not weathered.	The flake may have been struck from a core of the Victoria West type.
*A-573	Clacton-like flake	12.2 x 10.2 x 5.2 Oval.	Fresh.	Large flake. Ventral face with bulb of percussion, and a plain striking platform. Dorsal face has a flake-scar, smaller than the lower, and a negative bulb. A crescent-shaped area of the original pebble surface remains. No secondary working.
A-111	Do.	13.5 x 12.1 x 3.6 Roughly semi-circular.	Slightly weathered; tinged by laterite.	<i>Cf.</i> above, but there is a striking platform at about 130° to the main flake-scar. Dorsal surface has two flake-scars. Edges look unused. Plate IV(g).
*A-109	Do.	10.8 x 8.8 x 3.0	Do.	Semi-lunar flake tool, <i>cf.</i> A-111. The dorsal face has only one flake-scar. The straight working edge shows evidence of use.
A-456	Do.	7.1 x 5.2 x 2.6	Do.	<i>Cf.</i> A-109, but no striking platform a flat part of the pebble having served as one.
*A-577	Left-handed flake.	9.1 x 5.6 x 2.2 Elongated oval.	Slightly weathered; tinted by laterite.	<i>Cf.</i> 111, but the striking platform is on the left side. Prominent bulb of percussion. The cutting edge has three or four flake-scars.
*A-494	Flake tool	10.0 x 6.1 x 2.4 Reniform.	Very slightly weathered; not rolled.	The two faces formed each by a main flake-scar, which intersect and produce the semi-circular working edge. Only one prepared striking platform. The butt is straight, as in backed blades, and has the original pebble surface.
*A-193	Flake	9.4 x 7.5 x 2.6 Reniform.	Fresh.	Striking platform at about 130°.
A-66	Do.	7.9 x 6.9 x 2.5 Cordate	Do.	Striking platform present. Flaked on the dorsal face also.
A-107	Do.	11.5 x 8.4 x 2.9 Irregular.	Do.	Rough flake. Chipped on the pebble surface.
*A-574	Do.	9.6 x 8.4 x 3.0 Cordate.	Do.	Striking platform at right angles to the flake-scar.
*A-452	Do.	9.6 x 6.5 x 2.9 Elliptical.	Slightly worn.	Side of a pebble. Striking platform at 110°.
A-593	Do.	8.7 x 7.9 x 3.1 Roughly circular.	Weathered; pitted in the course of lateritisation.	Striking platform present. Area near it is flaked.
A-189	Do.	8.0 x 8.2 x 3.3 Rectangular.	Slightly weathered; not rolled.	Striking platform at about 135°. The upper face has three large flake-scars.



Field No.	Type.	Size and shape.	Condition.	Description.
A-435	Flake . . .	7.6 × 7.2 × 2.3 Roughly triangular.	Very slightly weathered.	Bulb of percussion present. The dorsal face mostly of the original pebble cortex. One edge on the ventral side has fine secondary working.
*A-123	Do. . . . .	7.4 × 5.7 × 2.5 Ovale .	Very worn . . .	Almost like a hand-axe on a flake. Bulb of percussion and striking platform present.
A-183	Do. . . . .	7.0 × 5.2 × 2.1 Ovale .	Fresh . . . . .	Flake with prepared striking platform. Crude flaking on the other face. Cutting edge jagged and blunted. Scraper (?)
A-62	Do. . . . .	11.5 × 8.0 × 3.4 Roughly triangular.	Do. . . . .	Roughly worked flake.
*A-98	Do. . . . .	9.0 × 7.0 × 2.5 Roughly triangular.	Do. . . . .	Looks like a point.
*A-609	Thick flake . . .	9.1 × 7.2 × 3.3 Ovale .	Worn, and rolled	Thick flake, with a striking platform. The dorsal face roughly flaked.
A-601	Thin flake . . .	6.9 × 6.0 × 1.9 Truncated oval.	Very slightly weathered; tinted by laterite.	Bulb of percussion and striking platform present. Dorsal surface worked.
*A-38	Hollow scraper	8.2 × 5.9 × 2.7 . . .	Fresh . . . . .	More or less like a diminutive hand-axe but having a distinct curved beak at the tip, which makes one side clearly concave.
A-523	Do. . . . .	8.1 × 6.5 × 3.1 Thick .	Weathered and worn	(Cf. above. The concavity formed by rough chipping. Ventral face is formed by the original pebble cortex. Plate IV(k).
A-135	Do. . . . .	8.0 × 5.2 × 2.5 Thin .	Fresh . . . . .	
A-106	Do. . . . .	9.0 × 6.5 × 3.5 Thick .	Do. . . . .	Opposite the hollow side, there is the pebble-butt.
*A-602	Do. . . . .	9.5 × 6.6 × 2.6 Thin .	Slightly weathered. Dark colour.	Pebble-butt as in A-106. The ventral face and part of the dorsal face formed by large flake-scars.
*A-526	Do. . . . .	7.8 × 6.4 × 3.2 Thick .	Slightly weathered. dark colour; tinged by laterite.	Crudely flaked. The hollow formed by a bold stepped flake-scar.
A-45	Do. . . . .	8.7 × 5.5 × 3.4 Thick .	Very much rolled and weathered.	Roughly flaked.
*A-519	Do. . . . .	9.8 × 6.6 × 3.5 Thick .	Do. . . . .	
A-191	Do. . . . .	7.7 × 6.0 × 3.1 Thick .	Slightly weathered .	Ventral face nearly flat. The hollow formed by a large flake having been removed.
*A-512	Do. . . . .	7.6 × 5.8 × 2.4 Thin .	Fresh . . . . .	Finely flaked.
*A-44	Do. . . . .	7.5 × 4.7 × 2.6 Thin .	Slightly weathered .	Pointed. Perhaps a double utility tool.
*A-41	Do. . . . .	6.6 × 4.1 × 2.0 Thin .	Do. . . . .	
A-437	Do. . . . .	6.2 × 5.4 × 2.9 Roughly triangular.	Not rolled . . .	Flat butt. The basal side hollow. The edge in the hollow has fine retouching and the tip opposite the butt has retouch for an end-scraper. Plate IV(i).
A-83	Do. . . . .	6.8 × 5.2 × 1.8 Roughly triangular.	Not rolled, but weathered.	Made from a thin flake, only the upper face worked.
*A-40	Do. . . . .	6.5 × 4.4 × 1.6 Beak-like.	Rolled and weathered	Very roughly made.



Field No.	Type.	size and shape.	Condition.	Description.
A-565	Hollow scraper	5.7 x 4.9 x 2.2 Kidney-shaped.	Rolled and weathered.	Very roughly made.
A-43	Do.	8.1 x 5.2 x 2.5 Mango-shaped.	Slightly weathered	
*A-42	Do.	7.8 x 4.6 x 1.9 Very thin	Do.	Tip blunt.
A-589	Do.	6.0 x 5.0 x 2.2	....	From a quartz flake. The beak beyond the hollow is also sharp.
*A-320	Do.	8.5 x 8.3 x 3.0	....	Quartz. Made from one half of a pebble.
A-158	Do.	8.7 x 7.1 x 2.6 Thin	Slightly weathered	Made on a flake. Tip hollow. Not typical.
*A-189	Do.	10.0 x 7.0 x 3.8 Thick	Not rolled	The tool is like a hand-axe, but the cutting edge is concave.
*A-539	Side-scraper	7.1 x 4.9 x 2.0 Thin	Weathered and rolled	Made from a thin flake, one edge of which is bevelled.
A-597	Do.	7.4 x 4.9 x 2.1 Thin	Do.	
A-72	Do.	10.1 x 5.4 x 2.2 Semi-lunar; medium thickness.	Slightly weathered	Made from a flake. The arched edge retouched. The straight edge steeply bevelled.
*A-464	Do.	8.0 x 6.3 x 3.2 Thick; triangular.	Fresh	Fine retouch on the working edge, to make it bevelled.
A-436	Do.	6.0 x 4.9 x 1.5 Thin; semi-circular.	Slightly weathered	The arched edge finely retouched. So also the straight edge. Plate V(b).
A-485	Do.	6.4 x 4.5 x 2.3 Thick; trapezoid.	Fresh	Corner of a pebble. The arched side has a curved flake-scar, which is not further worked.
A-434	Do.	5.1 x 4.7 x 2.7 Thick; semi-circular.	Do.	A thick flake with a prominent bulb. Straight butt at right angles to the main flake-scar. The dorsal pebble surface chipped to form an arched working edge. Plate V(c).
A-278	Do.	7.2 x 4.9 x 3.7 Thick; oval.	Slightly weathered	A pebble with two sides chipped into a thin edge.
*A-462	Do.	5.8 x 4.8 x 1.8 Thin; semi-circular.	Do.	Straight-bitted and "backed" flake, part of the arched edge of which is finely retouched.
A-655	Do.	6.0 x 4.2 x 2.0 Roughly semi-circular.	Very slightly weathered.	"Backed" flake. Edge blunted by use.
*A-616	Do.	5.8 x 5.1 x 2.1 Semi-circular.	Do.	Flake with bulb of percussion. Edges chipped further.
*A-488	Do.	7.0 x 5.8 x 2.5 Triangular.	Worn; weathered	Two sides of the triangle "backed", the third side further chipped and bevelled.
*A-150	Do.	6.4 x 4.3 x 2.1 Blade-like.	Not weathered	Convex edge retouched.
A-137	End and side-scraper.	7.5 x 5.9 x 1.9 Oval	Not rolled	Made from a thin flake. Broad end and part of one side retouched.
*A-80	Do.	6.3 x 4.5 x 1.3 Ovate	Not worn	Thin flake. One edge backed and the other two finely retouched.
*A-163	Triangular scraper	6.5 x 9.3 x 3.3	Slightly weathered	Low, pyramidal flake, with four straight facets; edges blunted.
A-97	Do.	6.0 x 6.5 x 2.7	Do.	Cf. the above in general shape, but the dorsal surface is irregularly flaked.



Field No.	Type.	Size and shape.	Condition.	Description.
A-355	Triangular scraper	8.4 × 5.5 × 3.0	Slightly weathered	<i>Cf.</i> A-163, but is made on a core. Irregular.
A-443	Do.	9.3 × 6.0 × 3.1	Do.	Made from a triangular flake. The business edge further chipped.
*A-599	Do.	7.1 × 6.6 × 2.8	Slightly weathered. Laterite tinged.	Made from a flake. The business end made by the intersection of the two dorsal and ventral flake-scars.
*A-483	End-scraper	6.2 × 4.0 × 2.2 Ovale	Slightly worn	A thick flake. The broader end finely chipped.
A-649	Do.	6.0 × 4.6 × 1.9 Rough parallelogram.	Not worn	From a flake. No retouch.
A-591	Do.	5.9 × 5.2 × 1.6 Triangular.	Worn	Flake. End finely retouched.
A-104	Do.	5.9 × 3.7 × 2.0 Triangular.	Not worn	An irregular flake. The business end as in a planing tool. Sides roughly chipped.
*A-600	Do.	4.4 × 3.8 × 1.3 Triangular.	....	A simple flake.
*A-215	Do.	7.1 × 4.8 × 1.9 Rectangular.	Slightly worn	A flake. The end retouched.
A-629	Do.	6.2 × 4.1 × 2.1 Oval	Do.	An irregular flake. Fine bevelled edge.
*A-603	Do.	5.0 × 3.6 × 1.5 Oval	Do.	Ditto.
A-70	Blade	10.8 × 5.0 × 1.0	Fresh	Made from a long flake. Ventral face one entire flake-scar. Dorsal face of two longitudinal flake-scars.
*A-496	Do.	6.7 × 5.4 × 2.0	Slightly weathered	From a flake. Each face has two long flake-scars.
A-89	Do.	9.1 × 4.7 × 1.8	Fresh	<i>Cf.</i> A-70.
*A-217	Do.	8.6 × 5.2 × 2.5	Slightly weathered	Ditto.
A-647	Do.	6.0 × 3.8 × 1.7	Do.	Ditto, but more flaking on the dorsal face.
A-115	Do.	5.4 × 3.6 × 1.4	Do.	Made from a piece of pebble. Two long flakes, and three small flakes removed on the ventral face.
*A-469	Do.	6.2 × 3.8 × 1.2	Do.	<i>Cf.</i> A-70, but cutting edges curved.
*A-680	Do.	5.0 × 3.3 × 1.8	Do.	"Backed" by a straight pebble surface. Straight cutting edge.
A-540	Do.	6.5 × 3.7 × 1.0	Worn	Thick "backed" blade. The "back" has the natural pebble cortex.
*A-563	Do.	5.0 × 3.2 × 1.5	Fresh	From a flake. The dorsal face made of one longitudinal median flake, and smaller flaking to form the cutting edge.
A-683	Do.	5.8 × 3.4 × 1.8	Slightly weathered	"Backed" blade. The faces formed by single long flake-scars. Prepared "back".
*A-306	....	6.0 × 4.8 × 1.5	Do.	Broad flake. "Backed."
*A-594	....	7.0 × 4.5 × 1.4	Slightly weathered; laterite tinged.	Broad flake. The "back" formed by the original pebble surface.
A-50	....	6.0 × 3.5 × 1.6	Do.	An unworked flake resembling the blade A-594.



Field No.	Type.	Size and shape.	Condition.	Description.
*A-378	Blade	6.2 x 4.9 x 2.4	Worn and weathered	"Backed." The cutting edge formed by the intersection of the dorsal and ventral flake-scars.
*A-151	Do.	5.7 x 2.3 x 1.3	Slightly worn. Late-rite tinged.	Simple unworked flake, with a median ridge on the dorsal face.
*A-186	Do.	7.2 x 4.9 x 2.9	Very slightly weathered.	A semi-lunar flake, type from which blades are made.
A-306	Do.	8.1 x 4.3 x 2.2	Weathered	A long flaked chip resembling a blade. Irregular.
A-687	Do.	6.1 x 4.6 x 1.7	Do.	A crude blade.
*A-143	Do.	6.1 x 4.5 x 2.2	Do.	Iditto.
A-684	Do.	5.6 x 3.7 x 1.3	Fresh	Fine tool, the upper edge having four long flake-scars.
A-680	Do.	6.5 x 4.3 x 1.6	Do.	A simple flake. Dorsal face made of two long flake-scars meeting in a median ridge.
*A-116	Do.	4.2 x 2.8 x 1.4	Do.	From a flake. Dorsal face has three long flake-scars.
A-242	Do.	8.2 x 4.5 x 2.1	Worn and rolled	Thick flake with prominent bulb and a "back" of crescent shaped pebble surface. Edge roughly chipped.
A-303	Do.	9.2 x 6.2 x 2.8	Fresh	A roughly triangular flake, pebble-butt. The straight edge chipped on the dorsal face.
A-377	Do.	4.8 x 2.9 x 1.5	....	Quartz blade made from a flake.
*A-262	Do.	5.2 x 2.9 x 1.4	....	Iditto.
*A-90	Do.	5.9 x 2.5 x 1.5 Thin	Unrolled	Blade worked on either side, the transverse flake-scars meeting in a median longitudinal ridge.
A-117	Do.	5.9 x 3.6 x 2.3 Thick	Do.	( <i>Cf.</i> above, but thicker.
*A-567	Do.	5.3 x 3.9 x 1.9 Thin	Unrolled; laterite tinged.	( <i>Cf.</i> above but broader. Dorsal face flaked all over irregularly.
A-393	Shouldered blade	8.8 x 5.1 x 2.1 Thin	Weathered	Made from a thin flake with a prominent bulb and low angled striking platform, worked only on the dorsal face, along the edges, several of the flakes being stepped, and very thin. The two ends are straight and truncated. By removing a large bit from one end, a shoulder is produced, probably for hafting.
*A-300	Do.	6.7 x 3.1 x 1.1 Very thin.	Slightly weathered	Made from a thin flake. Worked chiefly only on the dorsal face. Shouldered.
*A-131	Do.	7.9 x 4.5 x 1.9 Thin	Do.	( <i>Cf.</i> A-300.
A-632	Do.	4.9 x 3.3 x 1.3 Thin	Do.	Small. ( <i>Cf.</i> A-300.
A-68	Small hand-axe	7.3 x 4.5 x 1.8 Oval	Slightly worn	Made from a flake from the side of a pebble. So only dorsal face worked. Fine and minute flaking. Those near the edges stepped. Plate VI (k).
*A-250	Do.	6.8 x 4.4 x 1.8 Nearly triangular.	Do.	( <i>Cf.</i> A-68, but more pointed, and less worked.



Field No.	Type.	Size and shape.	Condition.	Description.
*A-82	Small hand-axe	7.5×5.3×1.0 Rhomboidal; thin.	Slightly worn	A very thin flake. Both the faces formed each by a single flake-scar. Two opposite edges levelled. Would have made a good lance-head, the three-sided point being formed by the levelled edge on one side and the flake-surfaces on the other two.
A-264	Do.	7.5×3.5×2.8 Lanceolate; transverse section is rectangular.	Unrolled	Made from a small core. Long-drawn point. Would have made a good lance-point. Roughly flaked. Dorsal face made of about four converging flake-scars, lower by two long ones. Plate VI (j).
*A-35	Do.	7.7×5.8×1.7 Pointed oval; thin.	Do.	Made from a thin flake. Dorsal face shows irregular flaking. Fine pointed end made by two symmetrical flake-scars.
A-88	Do.	7.2×4.1×1.4 Lanceolate; thin; thicker towards the point.	Do.	Made from a flake. Upper face crudely flaked, stepped. Edge retouched.
A-54	Do. (?)	6.8×5.5×1.7 Oval	Not weathered	A simple flake from a pebble. The flake-scar quite straight and flat. Edges slightly retouched. No bulb of percussion seen.
*A-167	Do.	6.5×4.7×2.2 Oval	Weathered	A small hand-axe with a thick butt, some of the original pebble surface remaining on the butt. Finely flaked on both the faces.
A-245	Do.	7.5×4.9×2.1 Oval	Not weathered	Made from the side of a pebble. Dorsal face formed mostly by the original pebble surface, except near the tip and the right side, where it shows fine flaking. Ventral face, flaked from the edge towards a median longitudinal ridge. Stepped flaking on the right side.
A-103	Do.	5.9×4.0×2.4 Oval	Weathered	Made from a small core. Transverse flakes on both sides. Pointed end is thick.
*A-33	Do.	7.0×5.1×2.2 Pear-shaped.	Slightly rolled and weathered.	Made from the side of a pebble. Fine, thin point.
A-524	Do.	6.8×5.3×2.5 Pear-shaped.	Not rolled	Made from a small pebble. The butt still has the crust of the pebble. Thin, somewhat broad point. Dark grey quartzite.
*A-522	Do.	7.7×5.0×2.9 Ovale	....	Dorsal side has convergent flake-scars.
A-323	Do.	7.7×5.2×2.2 Almond-shaped.	Not rolled	Thin hand-axe, dorsal and ventral faces having each a large flake-scar. The point is not fine.
*A-17	Do.	7.8×4.9×2.2 Pointed oval.	Do.	Quartz. Crude, but has a fine point.
A-538	Do.	7.6×5.2×2.9 Pointed oval.	Not rolled; tinged by laterite.	Crude. Stepped flaking. Thick point.
*A-483	Do.	6.2×4.3×2.6 This; elliptical.	Rolled and weathered	Finely worked, with small stepped flake-scars. Dorsal surface has a pronounced median ridge. No definite point, hence difficult to suggest use.
A-528	Do.	7.1×4.9×2.6 Not thin; oval.	Not rolled	Quartz. Flake-scars not well defined because of the coarseness of the material. Thin working end.



Field No.	Type.	Size and shape.	Condition.	Description.
*A-219	Small hand-axe	7.4 x 5.1 x 2.1 Thin; pointed oval.	Not rolled; weathered; tinged by laterite.	Thin hand-axe flaked all over. Broad point.
*A-102	Do.	7.2 x 5.1 x 2.3 Thimble; oval.	Not rolled; dorsal face looks weathered.	Ventral face nearly flat except for a few stepped flake-scars on the right side which make that edge sharp. Dorsal face more flaked. Point thin and sharp. Quartz.
A-564	Do.	6.6 x 4.9 x 3.2 Thick	Rolled and weathered	Made from a small pebble. The point is stumpy. Stepped flaking.
A-521	Do.	6.4 x 4.7 x 2.4 Oval; thick.	Not rolled	Made from half a pebble. The ventral face is flat. The butt retains the original pebble crust. Tip and sides worked. Tip battered.
*A-338	Do.	5.6 x 4.7 x 1.9 Oval; thick.	Not rolled; weathered	Made from a thin pebble-backed flake. Thinned by bold stepped flaking. Edge thin and broad.
*A-544	Flake-point	6.9 x 6.0 x 1.6 Thin; triangular.	Very slightly rolled	Made from a thin flake. Straight "backed" butt. Fine retouching on the pointed tip. Thin stepped flaking near the tip. The larger flakes are also exceedingly thin.
A-546	Do.	8.1 x 6.5 x 1.9 Thin	Do.	<i>Cf.</i> above. On the ventral face is the main flake-scar. On the dorsal face, the butt is reduced by stepped flaking. The tip formed, on the dorsal side, by one flake-scar, and the original pebble surface.
*A-214	Do.	8.9 x 6.4 x 1.8 Thin	Do.	From a thin flake. The faces formed each by a main flake-scar. Dorsally, near the tip, step flaking and retouch.
A-142	Do.	8.2 x 4.2 x 1.4 Thin	Not rolled	A long flake. Ventral face not worked. By removing fairly large flakes, a fine point is got. The sides beyond the point battered, probably for hafting. Plate V (p).
*A-223	Awl-like tool	6.7 x 6.0 x 2.4	Weathered, but little rolled.	Made from a split pebble. Two oblique flakes removed from the lower edge of the ventral face, which give a "rib" to the elongated point. Stepped flaking on the dorsal face near the tip to produce a nose-like point. May have been used for piercing.
A-23	Do.	6.2 x 5.5 x 3.0	Not rolled; tinged by laterite.	<i>Cf.</i> above. The point is broader. The flakes are more longitudinal.
*A-25	Do.	5.9 x 5.3 x 2.3 Straighter sides.	...	<i>Cf.</i> above. Stepped flaking. The point not fine. No definite shoulder.
*A-171	Do.	5.7 x 3.9 x 1.7	Much rolled	Made from a core. The point is not fine. No stepped flaking. The working end is triangular in section.
*A-259	Do.	4.8 x 4.7 x 1.9	Weathered, but not rolled.	Made from a thin flake. Has pebble butt. Fine flaking, stepped near the tip. Flat, not pointed, working end.
A-410	Do.	6.8 x 4.7 x 2.3 Pointed oval.	...	Quartz flake. Dorsal face worked; longitudinal flaking; moderately long nose, trapezoid in section. Plate VI (c).
A-58	Do.	6.7 x 6.7 x 2.2 Thin	Not rolled. Very slightly weathered.	Thin flake. Worked evenly on the dorsal face, along the edges, which are thin and sharp. Tip thin but broad. Some stepped flaking near the tip.



Field No.	Type.	Size and shape.	Condition.	Description.
*A-24	Awl-like tool	5.1 × 4.3 × 1.5 Thin	Not weathered	Thin flake. Dorsal step-flaking. Sharp tip, not quite pointed.
A-324	Do.	5.4 × 4.0 × 1.6 Pear-like	Slightly weathered	From a flake. Two oblique, curved dorso-lateral flake-scars produce a nose which is triangular in section. No retouching.
*A-161	Do.	5.3 × 5.2 × 2.5 Cordate	Not weathered	From a flake. Little working on the ventral, flat face, except a minute lateral flake-scar near the fine nose. More flaking dorsally. Step-flaking laterally. The thin tip is made finer by step-flaking.
A-31	Do.	5.9 × 4.5 × 1.9 Roughly triangular; thick.	Slightly weathered	From a flake. Ventral face unworked. Sides nearly vertical with minute step-flaking. Short fine nose, triangular in section.
*A-551	Do.	4.9 × 4.8 × 2.4 Pear-shaped.	Not weathered or rolled.	Made from a pebble. One flat flake-scar ventrally, and two curved oblique ones dorsally produce the short fine nose, which is triangular in section.
A-28	Do.	4.5 × 3.9 × 0.9 Thin	Do.	Similar to the above in shape, but made from a very thin flat flake. Nose short and parallelogram-like in section near the neck. Plate VI (d).
*A-30	Do.	4.2 × 3.9 × 0.8 Pear-shaped.	Do.	Cf. A-28, but flake thicker near the nose. The nose produced by a flat ventral, an arched dorsal, and obliquely curved lateral flake-scars.
A-29	Do.	4.4 × 4.2 × 1.4 ovate.	Tinted by laterite	Made on a flat, thin quartz chip coarse grained. Plate VI (b).
A-24	Do.	5.7 × 4.7 × 2.2 Pear-shaped.	Slightly weathered	Made from a split pebble. Flaked on the dorsal and ventral faces. Smaller flakes stepped. Transverse section of the nose rhomboidal. Plate VI (a).
A-255	Do.	5.4 × 4.6 × 1.3 Roughly trapezoid.	Slightly rolled and weathered.	Slate coloured quartzite. Made from a flake. Ventral face unworked. Nose triangular in section. No definite neck. Plate VI (g).
*A-21	Do.	4.1 × 3.7 × 1.4 Roughly triangular.	Not weathered	Made from a thin flake. Right side (viewed ventrally) is a long oblique flake-scar. Dorsally, stepped flaking. Longish and extremely fine nose. A very fine tool.
*A-22	Do. (1)	5.2 × 3.8 × 0.9	Do.	Made from a flake. Worked only dorsally. Longish nose.
A-26/1	Do.	4.4 × 4.3 × 1.3 Triangular.	....	Flake. Flat point. No stepped flaking.
*A-154	Do.	4.3 × 3.0 × 1.3 Triangular.	Not weathered	Flake. Triangular in section, ending in a narrow straight edge.
*A-25	Do.	5.2 × 3.9 × 1.0	....	Made from a thin split pebble. Ventral face flat. Nose triangular in section.
A-27/1	Burin	6.0 × 5.0 × 1.0 Irregular	Not weathered	A thin flat flake. The two thin vertical sides meet to form a four-sided point. Point blunt.
A-26/2	Do.	6.2 × 4.2 × 1.2 Irregular	Do.	Thin flake, showing a rough prepared faceted striking platform and bulb of percussion. The point formed by the meeting of the longitudinal flake-scars on the sides. Section of the nose above the point is trapezoid. Plate VI (f).



Field No.	Type.	Size and shape.	Condition.	Description.
*A-296	Burin and end-scraper.	4.7 × 3.7 × 1.2 Triangular.	Weathered and laterite tinted.	Made from a thickish flake. Very little working on the ventral face. Dorsally the broad end has flake-scars which produce a scraper edge. The pointed end is like a graver point, made by the intersection of oblique flake-scars on the side.
*A-36	Do.	6.6 × 4.7 × 1.6 Triangular.	Slightly weathered.	A thin, straight-butted flake, with one of the sides flaked straight and vertical, producing a triangular-sectioned nose. An unfinished piercing tool (f).
*A-553	A boring tool.	7.2 × 4.3 × 2.2 Irregular.	Not rolled.	From the side of a pebble. Ventrally the original pebble cortex still remains. Dorsally convergent flake-scars. The tip of the tool elongated to a nose. Tip blunted.
A-184	Do.	8.4 × 6.1 × 2.6 Triangular.	Weathered and slightly rolled.	From a core. Straight, flat-butted. Thin controlled flaking on both faces except near the edges where it is stepped. One of the edges battered. Tip broken.
A-560	Borer, graver, and knife.	7.1 × 4.4 × 1.5	Fresh.	A fine boring and graving tool (perhaps a multiple utility tool), made from a thin flake. The butt, i.e., the side opposite the point, is obliquely flaked. The lower straight knife-like edge is formed by the intersection of longitudinal flake-scars on the dorsal and ventral faces. Dorsally more flaked; the nose is formed here by two larger flake-scars. Plate V (h).
*A-27	Graver.	3.7 × 2.3 × 0.7	....	Chert. Plate V (i).
*A-48	Worked bit.	4.9 × 3.6 × 1.6	....	Quartz.
*A-49	Do.	4.6 × 3.3 × 1.4	....	Do.
A-39	Do.	3.6 × 3.0 × 1.3	....	Do.
Unnumbered.	Do.	3.6 × 2.8 × 1.2	....	Do.

SITES B, B<sup>1</sup>, B<sup>2</sup>.

B-4	Pebble tool. Cf. Pre-Stellenbosch type.	9.9 × 7.5 × 6.2	Worn, rolled and weathered. Brownish patches of patina. Not laterite stained as most of the tools from B sites are.	End of a pebble. Large pebble butt.
B-23	Do.	9.3 × 10.4 × 6.2	Slightly weathered; not worn.	Broad-edged. One large flake-scar dorsally, and three smaller ones ventrally. Edge horizontal, jagged. Plate II (b).
*B-32	Do.	11.0 × 7.7 × 5.0 Pointed	Weathered and tinted by laterite.	Made from a long pebble. Two flake-scars dorsally and two ventrally, all directed towards the pointed end.
*B-24	Abbevillian pebble tool.	6.1 × 5.2 × 3.7	Stained by laterite.	Pebble chipped at its end. Finer flaking than in the above.
*B-54	Abbe-Achenlean hand-axe.	8.5 × 5.4 × 3.8 Elongated; roughly triangular.	Lateritised, weathered and disintegrating into sand.	Made from a pebble. Thickest at the butt. Very roughly flaked.
B-4	Do.	8.2 × 6.3 × 3.6	Highly weathered and rolled.	Made from a pebble. By large flakes being removed, a thin edge is obtained.



Field No.	Type.	Size and shape.	Condition.	Description.
R1-27	Able-Acheulean hand-axe.	9.0 × 5.8 × 3.7	Weathered, but unrolled.	Made from a pebble. Pebble cortex seen on the butt and ventral face. Sides flaked steeply. Some stepped and controlled flaking.
*B1-24	Do.	11.1 × 9.4 × 6.4 Ovale	Not weathered; laterite tinted.	Roughly made from a pebble.
*B1-45	Do.	12.2 × 8.5 × 5.0	Fresh	Made from a thin core. Pebble cortex still remains on the butt.
*B1-39	Do.	8.4 × 6.6 × 2.6 Ovale; thin.	Weathered and rolled	From a split pebble. Worked mainly on the dorsal face. Bold free flaking.
*B1-5	Acheulean hand-axe.	8.1 × 5.7 × 3.3 Ovale	Do.	Flaked all over. Worn by rolling.
B-3	Do.	10.5 × 6.9 × 3.4 Ovale	Slightly rolled, but much weathered.	Finely worked tool.
*B-1	Do.	11.4 × 5.8 × 4.3 Lanceolate.	Not rolled; very slightly weathered.	Made from a long pebble. The original pebble cortex forms the whole ventral face. Fine flaking dorsally.
B-7	Do.	9.4 × 6.7 × 3.0 Ovale	Rolled and weathered	....
B-9	Do.	10.4 × 8.9 × 2.7 Broad; ovate; thin.	....	From a thin flake. Small number of flake-scars. Stepped flaking.
B1-37	Flaked pebble	....	Stained by laterite	Found <i>in situ</i> in hard laterite. Laterite sticking hard to the pebble.
B1-13	Chipped pebble	6.6 × 5.1 × 3.2	Weathered and rolled	Pebble with controlled and stepped flaking. Tip battered. Probably used as a flaking tool.
B-10	Cleaver	10.5 × 8.3 × 3.1 Nearly oblong.	Slightly weathered; stained by laterite; cutting edge broken.	Made from a flake thick at the butt. Transverse section near the butt is trapezoid. Bulb of percussion on the butt. Sides finely worked.
*B-2	Do.	12.0 × 8.3 × 3.1 Celt-like	Not rolled	Sides and edges worked. Narrow butt, arched cutting edge; retouched.
B1-52	Do.	12.0 × 9.5 × 4.5 Obovate	Slightly rolled; weathered.	Thick butt. Asymmetrical. Cutting edge narrower than the butt, and also irregular.
*B-6	Do.	11.4 × 9.0 × 4.0 Thick	Not weathered	A thick flake. The two main flake-scars intersect to form the cutting edge.
*B1-2	Coroid, elongated	11.4 × 7.9 × 2.9	....	
B1-58	Do.	8.0 × 5.2 × 3.8	Worn; stained deeply by laterite.	
*B1-9	Do.	9.4 × 6.3 × 3.0	....	
*B1-36	Do.	6.7 × 4.6 × 2.9	....	
*B1-1	Do.	7.2 × 4.9 × 3.4	....	
B1-34	Do.	8.4 × 5.4 × 2.6	....	Coarse grained material.
B1-29	Do.	5.8 × 3.8 × 3.4	Stained by laterite.	
B1-31	Do.	8.8 × 6.7 × 3.2	....	
*B1-37	Do.	6.4 × 5.6 × 3.0	....	
*B1-8	Do.	6.0 × 6.0 × 3.8	....	
*B1-44	Core	5.6 × 5.0 × 4.5	....	
*B1-33	Discoidal coroid	5.8 × 5.1 × 3.5	Worn.	



Field No.	Type.	Size and shape.	Condition.	Description.
B <sup>2</sup> -7	Discoidal coroid	7.2 × 6.2 × 2.8	Worn.	
*B <sup>2</sup> -32	Do.	6.8 × 5.9 × 3.6	Do.	
B <sup>2</sup> -38	Do.	7.0 × 5.7 × 3.7	Not worn; weathered.	
*B <sup>2</sup> -42	Do.	6.6 × 6.3 × 2.7	Worn.	
*B <sup>2</sup> -9	Do.	6.3 × 5.2 × 2.9	Do.	
B <sup>2</sup> -12	Do.	5.7 × 4.3 × 3.6	Do.	
B <sup>2</sup> -34	Do.	5.8 × 4.9 × 2.6	Do.	
B <sup>2</sup> -18	Do.	7.5 × 7.3 × 3.5	Do.	
B <sup>2</sup> -26	Do.	4.2 × 3.3 × 1.9	Do.	
*B <sup>2</sup> -28	Do.	6.4 × 6.2 × 3.0	Do.	
*B <sup>2</sup> -57	Do.	4.2 × 3.6 × 2.0	Worn and stained by laterite.	
B <sup>2</sup> -27	Do.	5.2 × 4.7 × 2.1	Do.	
B <sup>2</sup> -28	Do.	5.0 × 5.2 × 2.3	Do.	
*B <sup>2</sup> -25	Do.	4.6 × 4.5 × 2.5	Do.	
*B <sup>2</sup> -41	Do.	4.2 × 4.0 × 1.2	Do.	
B <sup>2</sup> -22	Do.	2.9 × 2.6 × 1.4	Do.	A small piece.
B <sup>2</sup> -16	Do.	6.7 × 4.2 × 1.8	Do.	
B <sup>2</sup> -17	Do.	4.4 × 3.5 × 3.0	Do.	
B <sup>2</sup> -20	Do.	5.2 × 4.2 × 1.6	Do.	
B <sup>2</sup> -6	Do.	5.9 × 5.2 × 4.0	....	
B <sup>2</sup> -39	A split pebble	8.2 × 7.8 × 2.1	....	
*B <sup>2</sup> -8	Disc.	8.5 × 7.2 × 3.2	Weathered, but not rolled.	Controlled flaking all over. Stepped scars near the edges.
*B <sup>2</sup> -19	Core	5.6 × 5.1 × 3.0	....	Quartz.
*B <sup>2</sup> -33	Flake chopper	12.4 × 9.2 × 4.3 Shaped like the blade of a modern chopper.	Laterite stained	Made from a large thick flake. "Back-ed" by the original pebble surface. The cutting edge formed by the intersection of the dorsal and ventral main flake-scars.
*B <sup>2</sup> -56	Flake	6.1 × 4.6	Do.	A piece of a flake.
B <sup>2</sup> -35	Do.	6.6 × 5.8	Do.	A worked flake.
*B <sup>2</sup> -16	Do.	4.6 × 4.2	....	A worked flake.
*B <sup>2</sup> -12	Do.	8.2 × 6.0 × 1.9 Elliptical	Fresh	A thin flat flake; the edges serrated.
B <sup>2</sup> -11	..	5.8 × 4.2 × 2.0	Laterite stained	A flake with bulb of percussion. Worked on the dorsal side.
B <sup>2</sup> -16	..	7.4 × 5.5 × 2.8	....	A thick flake.
*B <sup>2</sup> -46	..	7.6 × 5.1 × 1.4	Weathered; looks pitted.	A flat elongated flake.
*B <sup>2</sup> -11	..	6.6 × 4.2 × 1.5	Not weathered	A thin flake.
B <sup>2</sup> -11	Hollow core scraper	6.0 × 4.4 × 2.3	Weathered and slightly worn.	Made from a pebble. Stepped flaking.
*B <sup>2</sup> -6	Do.	7.0 × 6.2 × 2.7	Worn slightly	Ditto.
B <sup>2</sup> -40	Hollow scraper on a flake (?)	10.3 × 8.2 × 2.4 Irregular	Weathered	Thinish, irregular flake; the lower edge is hollowed. Very crude.



Field No.	Type.	Size and shape.	Condition.	Description.
B <sup>1</sup> -43	Side-scraper	7.9 × 5.2 × 2.8 Roughly triangular.	Weathered and rolled	Made from a thick "backed" flake. The business edge formed by the intersection of two main flake-scars.
B <sup>2</sup> -59	Do.	6.2 × 5.9 × 1.5 Circular	Weathered	Made from a flake. "Backed" butt. The working edge flaked slopingly. Plate V (h).
B <sup>2</sup> -23	End-scraper	5.2 × 3.8 × 2.2 Blade-like	Do.	Flake. Butt flat. The end flaked in order to be bevelled.
*B <sup>2</sup> -16	Do.	5.8 × 4.4 × 2.6	Do.	From a small core.
B <sup>2</sup> -4	Scraper (?)	10.8 × 9.5 × 4.0 Thick	Slightly weathered	A thick flake, almost like a squat, truncated pyramid. The sides flaked slopingly.
B <sup>2</sup> -49	Do. (?)	4.0 × 3.4 × 1.3	Do.	From a flake.
B <sup>2</sup> -33	Do. (?)	6.3 × 4.7 × 1.7 Roughly triangular.	Weathered; laterite tinted.	Flake, very low pyramidal. The basal edge finely chipped to form a scraper.
B <sup>2</sup> -43	Do. (?)	6.8 × 5.1 × 1.7 Roughly triangular.	Do.	Flat, triangular flake. Lower edge bevelled by flaking.
B <sup>2</sup> -8	Blade	10.0 × 5.0 × 1.7	Not weathered	From a Clacton-like flake. Dorsal face has two long narrow flake-scars.
*B <sup>2</sup> -50	Do.	8.1 × 4.4 × 2.3	Weathered and laterite stained.	From a thick, "backed" flake. "Back" irregular.
B <sup>2</sup> -10	Do.	5.0 × 4.0 × 1.4	Not weathered	Working edge bevelled.
*B <sup>2</sup> -13	Do.	6.5 × 3.4 × 1.5	....	Worked "back".
*B <sup>2</sup> -25	Do.	5.9 × 3.0 × 1.5	Laterite tinted	Flake with pebble cortex on it.
B <sup>2</sup> -20	Do.	5.1 × 2.7 × 1.4	Weathered; laterite tinted.	Flake.
B <sup>2</sup> -30	Do.	5.6 × 4.1 × 1.7 Thick	....	Flake. Both ends truncated.
*B <sup>2</sup> -29	Do.	4.9 × 3.9 × 1.6	Weathered; laterite tinted.	Flake with the pebble surface. Worked on both the faces.
*B <sup>2</sup> -13	Do.	4.2 × 2.7 × 0.7 Thin	Not weathered	Thin flake.
*B <sup>2</sup> -48	Chopper (?)	6.7 × 4.5 × 2.1 Blade-like	Weathered; laterite tinted.	A pebble, "backed" blade-like flake, worked on one side. Edge blunted.
B <sup>2</sup> -45	Diminutive hand-axe.	6.6 × 5.6 × 2.3 Ovate	Weathered and rolled	Flaked all round. Stepped flaking; pointed end.
B <sup>2</sup> -55	Do.	6.3 × 5.0 × 1.8	Do. Tip broken.	
*B <sup>2</sup> -14	Do.	6.8 × 5.0 × 2.0	....	
*B <sup>2</sup> -35	Do.	8.0 × 6.4 × 2.0 Ovate	Weathered; not rolled	Very thin. Stepped flaking. Used as a scraper (?).
*B <sup>2</sup> -39	Awl-like tool	8.1 × 7.2 × 2.1 Thin	Worn	Thin flake, nearly flat. The tip ending in a short thin, shouldered nose.
B-23	Do.	4.5 × 2.9 × 1.1 Triangular.	Not worn	Made from a thickish flake, with two limbs one at right angles to the other. The longer arm flaked on both the right and left sides. The tip is not very pointed. In the fork between the two arms, there is a concavity, which may have been used as a spokeshave. Plate VI (e).
SITE C.				
*C-1	Microolith. scraper.	End. 2.4 × 2.2 × 0.9	Fresh	Chert. Made from an irregular flake. Minute flaking. Retouching on the snout-like working end.



## MANLEY COLLECTION OF STONE AGE TOOLS.

Field No.	Type.	Size and shape.	Condition.	Description.
SITE D.				
*D-8	Pebble roughly flaked at one end.	7.6 × 6.5 × 6.0	Weathered and rolled	Flaking tool (?). In this and the two below no attempt has been made to produce a cutting edge.
*D-9	Do.	7.8 × 6.9 × 5.9	Weathered but not rolled.	
D-36	Do.	7.6 × 7.7 × 6.1	Do.	
D-17	Worked pebble	8.0 × 5.6 × 4.5 Pear-shaped, thick.	Not rolled; weathered.	A crudely flaked pebble. Flat ventrally. Flaked near the pointed end.
*D-45	Hand-axe, Acheulean.	9.0 × 6.1 × 3.1 Tongue-shaped.	Highly weathered and rolled.	Flaked all round. Stepped flaking.
*D-16	Do.	8.8 × 5.7 × 2.7 Ovate	Do.	On a flake. Roughly flaked all round. Butt pointed.
D un-numbered.	Cleaver	10.6 × 6.0 × 3.7 Not thin	Do.	Arched butt, parallel sides, edge nearly straight. Sides sharp. May have been done on the Victoria West technique. Plate III (j).
D-4	Core	4.1 × 3.5 Conical.	Weathered and slightly worn.	Flaked all round. Pebble surface below.
D-5	Do.	6.9 × 6.7 × 2.4 Flat, tabular.	Do.	Sides have oblique flake-scars all round.
D-3	Coroid, discoidal	6.5 × 5.2 × 3.0	Worn and weathered	
*D-13	Do.	6.7 × 5.4 × 3.7	Do.	
D-47	Do.	4.6 × 4.6 × 2.2	Weathered; not rolled.	
*D-6	Do.	8.0 × 7.0 × 3.9	Weathered and rolled.	
*D-7	Do.	6.3 × 4.8 × 2.7	Do.	
D-12	Coroid, elongated	6.3 × 4.2 × 2.5	Do.	
*D-1	Elongated coroid	8.2 × 6.7 × 3.8 Almost semi-circular.	Worn and weathered	Crudely flaked. Side hollowed. Might have been used as a rubbing tool.
*D-27	Flake	8.8 × 7.2 × 4.3 Trapezoid, thick.	Weathered, not rolled	Thick. Bulb removed.
D-14	Do.	6.4 × 6.1 × 2.2 Round	Not weathered	Crudely flaked on the dorsal pebble surface and ventrally on a part of the edge.
D-40	Do.	6.4 × 5.6 × 2.4 Round	Weathered slightly	A flake from a pebble. Prepared striking platform.
D-2	Do.	8.4 × 5.4 × 2.4 Trapezoid.	Not weathered or rolled.	A thick flat flake. Straight edges at right angles to the long axis. The longest side vertically flaked. A planing tool (?). Plate III (i).
*D-31	Flake, scraper (?)	7.1 × 5.1 × 1.7 Thin	Not weathered and not rolled.	Thin flake. Edges bevelled. Pebble butt.
D-19	End-scraper	5.3 × 5.2 × 1.5 Fan-shaped.	Weathered	Made from a flake. Straight long flakes on the dorsal face, radiating from the thick butt end to the margin. Plate V (a).
D-28	Blade and end-scraper.	7.9 × 5.1 × 2.2	Do.	A long flake. End recurved and flaked on the pebble surface. The angle of the platform at the butt end is about 130°.
*D-41	End-scraper	4.7 × 4.1 × 1.5 Square	Do.	Flake. Straight butt. The end opposite the butt has nearly vertical retouch.



Field No.	Type.	Size and shape.	Condition.	Description.
D-46	Side-scraper	6.3 × 3.9 × 2.0 Blade-like.	Worn . . .	Thick flake. Straight edge, retouched.
*D-43	Blade . . .	4.3 × 3.2 × 1.0 Thin .	Not weathered .	Flake. The upper margin has retouch.
*D-24	Do. . . . .	5.4 × 3.5 × 1.1 . . .	Weathered . . .	Unworked flake.
*D-20	Do. . . . .	5.7 × 3.2 × 1.1 Not thin	Not weathered .	Flake. "Backed". Cutting edge retouched.
D-22	Do. . . . .	5.7 × 4.0 × 1.3 Not thin	Weathered . . .	Flake. Little worked.
*D-42	Awl-like tool .	5.4 × 5.2 × 1.8 Thin, triangular.	Not weathered .	Flake. Sides bevelled and meeting in a point.
D-39	Do. . . . .	4.9 × 5.0 × 1.8 Thin, triangular.	Weathered <sup>p</sup> . . .	Flake. Point blunted.

## SITE E.

E-41	Abbevillian hand-axe.	11.9 × 9.8 × 4.5 Roughly triangular.	Rolled and weathered	Made from a pebble. Flaked boldly on the dorsal and ventral faces. Butt. of pebble cortex. Pointed end.
*E-5	Do. . . . .	9.3 × 7.2 × 4.6 Ovate, thick.	Not rolled . . .	Made from pebble. Crude, bold, stepped flaking.
*E-12	Do. . . . .	10.2 × 9.4 × 4.6 Flat, tongue-shaped, not thick.	Weathered . . .	Pebble-butt. Flaked on the dorsal and ventral faces; large flake-scars. Sinuous edge.
*E-4	Do. . . . .	12.2 × 8.2 × 3.9 Ovate, flat.	Not rolled . . .	Pebble-butt. Point made thin by stepped flaking.
*E-3	Abbevillian-Acheulean hand-axe.	11.7 × 7.8 × 3.8 Ovate, flat.	Weathered . . .	<i>Cf.</i> above, but finer flaking.
E-7	Do. . . . .	11.1 × 6.9 × 4.0 Irregular.	Weathered and slightly rolled.	From a pebble. Tip broken.
E-43	Do. . . . .	11.1 × 7.8 × 4.7 Ovate .	Fresh . . . . .	Made from a pebble. Pebble butt. Thin large flakes. Pointed end thin. Edges very sharp.
*E-22	Do. . . . .	7.8 × 5.5 × 3.1 Broken .	Slightly weathered .	<i>Cf.</i> above. Irregular.
E-1	Do. . . . .	10.9 × 7.0 × 2.8 Pear-shaped.	Do. . . . .	Pebble-butt. Sides battered and nearly vertical.
*E-14	Do. . . . .	9.4 × 5.4 × 2.7 Ovate .	Weathered and rolled	Small pebble tool. Flat. Thin flakes removed.
*E-6	Acheulean hand-axe.	11.4 × 8.2 × 3.9 Pointed oval, thick.	Weathered and rolled. Sandstone-like below.	Flaked all over. Stepped flaking and retouch. S-curve present.
E-15/1	Do. (?) . . .	10.3 × 6.9 × 4.5 Pointed oval, thick in the middle.	Weathered and slightly rolled.	<i>Cf.</i> above. Few flake-scars visible except along the edges.
*E-11	Do. . . . .	7.6 × 6.5 × 2.7 Broken .	Slightly weathered .	Fine flaking. Stepped flake-scars numerous.
E-2	Do. . . . .	8.9 × 6.5 × 2.8 Broken, thin.	Slightly weathered but not rolled.	Stepped flake-scars predominate. Rather crude tool.
E-10/1	Do. . . . .	10.4 × 7.8 × 3.0 Ovate, thin.	Rolled . . . . .	From a flake. Butt has a prepared striking platform. Flaked on the pebble surface and near the pointed end on main flake-scar.
*E-10	Crude hand-axe .	9.9 × 8.4 × 3.6 Irregular, Pear-shaped.	Not rolled . . .	Flake tool. The narrow end is distinctly "shouldered". Two fresh-looking flake-scars on the ventral face.



Field No.	Type.	Size and shape.	Condition.	Description.
*E-31	A diminutive hand-axe.	9.0×4.6×2.6 Lancolate.	Rolled and weathered	Made from a blade-like flake.
*E-37	Hand-axe . . .	11.4×7.0×2.9 Lancolate.	Do.	Crudely flaked. Stepped.
E-40	Thin hand-axe . . .	10.4×6.9×1.9 Ovate, very thin.	Not rolled or weathered.	Made from a thin flake. Thin oblique flakes removed along the edges. Ends in a point. Plate III (c).
*E-30	Thin cleaver . . .	11.0×6.2×1.5 Very thin.	Do.	Thin flake. Broad cutting edge.
E-15/2	Cleaver . . .	12.5×6.6×3.0 Narrow; not thin.	Weathered and rolled	Made from a long flake. Flaking in the region of the cutting end and the lower half of the sides.
*E-16	Disc. . . . .	7.7×6.3×2.1 . . .	Not weathered	From a flake. Stepped flaking near one edge.
E-29	Flake . . . . .	7.0×7.5×1.7 . . .	Do.	Bulb of percussion present. The edge opposite the bulb bevelled by flaking.
E-34	Do. . . . .	8.4×5.8×1.9 . . .	Fresh. Broken	Recently broken and one large flake removed.
E-35	Do. . . . .	6.4×5.2×1.0 . . .	Slightly weathered	Thin flake.
E-25	Blade . . . . .	6.5×3.1×1.4 . . .	Laterite tinted	Flake, with prepared striking platform.
E-24	End-scraper . . .	5.0×2.7×1.5 Thick	Slightly rolled	Thick flake, nearly semi-circular in section; end retouched to a snout-like shape.

## SITE F.

*F-1	Acheulean hand-axe.	11.0×9.0×2.7 Ovate, thin.	Not weathered or rolled; tip broken.	Sharp all round. Stepped flake-scars especially near the edges.
F-2	Do. . . . .	10.7×8.8×2.4 Nearly oval.	Not weathered or rolled.	From a thin flake. Dorsal face, flaked only along the margin. Ventrally a very big stepped flake-scar, which makes that half thinner than the other.
F-3	Do. . . . .	11.7×8.7×3.1 Pear-shaped.	Not rolled; tip broken.	Made from the thin side of a pebble. Dorsally, the original pebble surface still seen, except for a large stepped flake-scar and another small one. Stepped flaking ventrally.
*F-32	Do. . . . .	11.0×7.7×2.8 Ovate	Do. broken.	Made from a thin flake. Pebble surface still on the butt. Flaked mainly along the edges.
*F-4	Do. . . . .	7.8×6.3×2.7 Ovate	Slightly rolled; tip broken.	Stepped flaking.
F-24	Do. . . . .	14.1×9.4×3.3 Irregular	Fresh . . . . .	Crudely made from a thick flake. Ventrally, the main flake-scar unworked except for one flake at the butt end. Dorsally, one large flake-scar, flanked by oblique flake-scars on the right. Cf. Victoria West tools.
F-16	Pick, or elongated hand-axe.	12.3×5.4×3.0 Lancolate.	....	Quartz. Point triangular in section. Made by removing a few flakes from a longish angular piece of white quartz.
F-48	Small hand-axe . . .	7.1×6.0×1.9 . . .	Not worn or rolled; tip broken.	From a flake. Stepped flake-scars.
F-12	Pebble flaking tool (?).	7.6×7.6×4.1 . . .	Slightly worn. Weathered.	A pebble with a few flake-scars at one end. Battered at the pointed end.



Field No.	Type.	Size and shape.	Condition.	Description.
*F-7	Flake chopper	8.5×7.0×3.1 Squat : tongue-shaped.	Not worn, but slightly weathered.	A corner of a pebble. Lower half of the pebble surface has longitudinal flake-scars, which intersect a large transverse flake-scar on the ventral side. The latter flaked all over. Minute stepped flake-scars on the sides.
F-9	Coroid, discoidal	7.0×5.7×3.8	Slightly weathered : not rolled.	
*F-30	Do.	5.3×4.6×2.9	Rolled.	
*F-37	Do.	7.5×6.4×2.9	Rolled and weathered.	
F-40	Do.	5.8×5.0×2.3	Slightly rolled and weathered.	
F-42	Do.	6.1×5.6×3.6	Rolled.	
F-43	Elongated Coroid	10.0×8.2×4.8	Worn and weathered	Perhaps part of hand-axe, the tip of which is broken. Bold flaking.
*F-18	Do.	8.4×6.3×3.3	Do.	
*F-13	Do.	6.0×4.0×2.9 Longish	Do.	
F-44	Do.	6.7×3.3×3.0 Longish	Do.	
F-41	Miniature hand-axe (?)	6.6×6.0×2.0	Worn	Tip broken.
*F-38	Do.	6.5×5.0×2.3	Slightly worn.	
*F-6	Flake	5.7×5.3×1.5	Fresh.	
F-28	Do.	6.0×4.9×2.4	Do.	
*F-15	Side-scraper	5.4×5.2×1.3 Roughly triangular.	Slightly weathered	Thin side of a pebble. One side nearly hollowed by a large flake-scar.
*F-22	Hollow scraper	5.0×3.4×1.5 Blade-like.	Weathered	From a flake.
*F-31	Do.	5.4×3.7×1.3 Blade-like.	Very much weathered	Do.
F-19	End-scraper	5.2×4.0×1.2 Blade-like.	Very slightly weathered.	Thin flake. Prepared striking platform on the butt. End finely retouched. Plate V (f).
F-5	Graver	7.2×4.5×2.3	Weathered and rolled	Made from a thickish flake from a pebble. Prepared striking platform on the oblique butt. Section below the point pentagonal. The graver point produced by a straight flake removed from the lower margin, and a corresponding one on upper margin on the dorsal face. Retouching along the upper margin. Plate VI (i).
*F-34	Graver (?)	14.5×2.7×1.2	Weathered	Made from a flake. By reducing the thickness near the tip, a point is produced. Not fine.
*F-45	Awl-like tool	5.1×3.5×1.8 Irregular	....	Quartz. A flake, with a fine triangular point. Would have made a nice spear head also.
F-11	Blade	9.2×4.7×1.7	....	Quartz.
*F-23	Worked bit	7.2×5.2×2.5	....	Do.



Field No.	Type.	Size and shape.	Condition.	Description.
SITE G.				
*G-67	Pebble tool, cf. Pre-Stellenbosch type.	13.1 x 9.3 x 9.0	Slightly weathered, but not rolled.	Made from the diagonal half of a large heavy pebble. Dorsally one large flake-scar, ventrally two, which intersect and form the broad jagged cutting edge. Two large flakes removed from the sides near the butt, perhaps to give a grip to the fingers. Plate II(f).
G-80	Do.	12.9 x 11.1 x 5.7 Broad oval.	Not rolled; little weathered.	Made from half a pebble. Ventral face nearly flat with two large flake-scars running obliquely across. The same face has two smaller flake-scars near the butt, and one along the right margin. Dorsal face has one large flake-scar near the butt, the flaking intended to reduce the thickness of the butt. Two small flake-scars along the left side. Three flake-scars, almost at right angles to the length of the tool, on the butt end. The business edge, which is about half the breadth of the butt, is formed by the first two ventral flake-scars intersecting the pebble surface remaining dorsally. Plate II (d).
*G-1	Abbevillian hand-axe.	20.8 x 11.2 x 6.9 Elongated oval; concave-convex in transverse section.	Very little weathered; not rolled.	Made from the side of a long pebble. Dorsal face still has the pebble cortex for nearly the whole of its right half, and also the butt. Three large flakes removed from the side, transversely, directed to a median dorsal ridge. On the right half another large flake-scar, near the lower end, directed obliquely towards the butt. Ventrally, the whole central region is occupied by a long U-shaped flake-scar, which has on the sides and tip smaller oblique flake-scars. The tip is fairly thin.
G-2	Do.	20.4 x 13.4 x 7.4 Rhomboidal in section.	Not rolled; very slightly weathered.	From a core. Flat butt almost at right angles to the main axial plain. Very crudely and irregularly flaked. Thin point. Plate II (h).
*G-4	Do.	14.9 x 7.5 x 5.0 Dagger-like.	Weathered; slightly rolled.	Made from a pebble. Dorsal surface mostly pebble cortex, except for a large flake-scar near the tip. Ventrally, two long flake-scars. Thickness of the butt reduced. Right side pebble surface.
G-83	Do.	15.7 x 10.3 x 5.0 Ovate	Not rolled.	One half of a split pebble. Half of the dorsal face and the butt has pebble cortex. Flaked near the tip, both dorsally and ventrally, to a fine point.
G-66	Do.	12.4 x 8.3 x 5.8 Ovate	Not rolled; laterite tinted.	From a split pebble. Ventral face quite flat and unworked. Section trapezoid.
*G-95	Abbevillian Acheulean hand-axe.	9.0 x 6.0 x 4.6 Ovate	Weathered; not rolled.	From a pebble. Longitudinal thin flakes removed. Some stepped. Fine point.
G-101	Do.	9.0 x 5.0 x 3.9 Ovate	Highly weathered; slightly rolled.	Pebble-butted. Thin long flakes removed from the ventral face. Retouching at the pointed end, dorsally.
G-86	Do.	8.7 x 6.4 x 3.1 Ovate	....	Quartz. Sharp all round. Broad point. A fine tool.
*G-103	Do.	8.0 x 6.2 x 2.2 Thin	....	Quartz. - From a flake.



Field No.	Type.	Size and shape.	Condition.	Description.
G-97	Abbevillian-Acheulean hand-axe.	13.5 × 7.2 × 3.5 Elongated oval. Not thick.	Laterite stained. One end broken.	Quartz.
*G-15	Do.	9.3 × 5.4 × 3.2 Elongated, elliptic.	....	Quartz.
*G-93	Do. ?	10.7 × 9.2 × 3.2 Irregular; flat.	Not rolled or weathered.	Made from a very flat flake. Crude stepped flaking. One side slightly concave. May have been used as a scraping tool.
*G-119	Do.	9.5 × 6.7 × 3.0 Ovale; straight butt.	Not rolled	Pebble butt. Stepped flaking. Thin point.
G-51	Do.	10.4 × 4.5 × 4.5 Dagger-like.	Rolled & weathered.	Made from a pebble. Pebble surface seen at the butt. Roughly pentagonal section. Thick at the butt and tapering to a fine point. Fine flaking.
G-41	Chopper & axe in one.	9.9 × 7.5 × 3.1	Very slightly weathered.	Hand-axe-like, but is really a multiple utility tool. Lower end pointed and retouched. Right edge thinned by stepped flaking and retouching. The upper end also thin. The left side thick, with two broad flake-scars forming a sort of butt. This tool must have been used unhalted. Plate III (a).
G-22	Small hand-axe	6.8 × 5.6 × 2.7 Irregular	Fresh-looking	Made from a flat pebble. Irregularly flaked.
*G-102	Acheulean hand-axe.	8.9 × 7.4 × 2.8 Cordate	Not weathered or rolled.	Made from a flake from the side of a pebble. Ventral main flake-scar unworked except for two long flake-scars near the tip running ventro-laterally. Fine longitudinal controlled flaking on the dorsal side.
*G-17	Do.	9.3 × 6.6 × 2.2 Long; ovate; thin.	....	Quartz flake. Fine point.
G-104	Flaking tool	9.7 × 7.1 × 4.3 thick.	Oval; Weathered	Pebble tool. Very thick and little flaked. Edges and tip battered.
G-43	A pebble scraper ?	8.0 × 6.4 × 4.4	Very little weathered; not rolled.	Side of a pebble crudely flaked to form a straight edge.
G-94	A pebble scraper	7.7 × 5.7 Squat	Do.	Made from a thick pebble. Bold steep flaking. The working edge formed by these almost vertical flake-scars meeting the pebble cortex on the flat ventral surface.
G-82	Core	10.0 × 8.8	Very much weathered. Iron stained; not rolled.	Crudely flaked to a point, but is very short and stumpy. Flaker (?)
*G-92	Do.	7.2 × 8.2 Squat	Weathered	Flaker (?)
*G-6	Do.	9.0 × 7.5 × 4.8	Do.	
*G-89	Do.	8.0 × 5.4 × 5.5	Do.	
*G-81	Discoidal coroid	10.5 × 10.5 × 5.9	Not rolled.	
G-91	Do.	8.9 × 8.3 × 5.5	Fresh	Lower surface flaked; the other pebble cortex.
*G-100	Do.	8.6 × 7.2 × 3.5	Do.	
G-98	Elongated coroid	10.3 × 7.8 × 4.8	Rolled	Deep brown glossy patina.
G-39	Do.	7.4 × 5.0 × 2.7	Do.	
G-84	Disc.	8.4 × 7.9 × 2.9 Thin	Rolled and weathered	



Field No.	Type.	Size and shape.	Condition.	Description.
*G-23	Disc.	7.2 × 6.4 × 2.9 Thin	Rolled and weathered	
*G-96	Flake side-scraper	8.8 × 6.2 × 2.3 . .	Fresh . . .	Flake, thick at the butt, the dorsal and ventral flake-scars meeting to form the working edge.
*G-8	Hollow core-scraper.	8.5 × 6.8 × 3.3 . .	Weathered . .	Pebble, one side chipped to a thin edge; other sides battered.
G-37	Side-scraper .	7.1 × 5.4 × 2.9 . .	Do.	Quartz. A core with one edge thinned.
G-56	Do.	7.6 × 7.6 × 2.3 Triangular.	Weathered and rolled	A flat flake one edge of which alone is bevelled on either side. Some step flaking along the other two sides.
G-51	Do.	4.2 × 3.7 × 1.2 . .	Do.	A chipped flake.
*G-72	End-scraper .	6.8 × 4.6 × 1.9 Blade .	Do.	A thick-butted flake, thin at the end. Longitudinal flakes at the scraper end.
G-24	Blade . .	6.2 × 2.8 × 1.0 . .	Do.	Backed, the back being concave; minute flake-scars along the arched cutting edge.
*G-20	Nosed boring tool, cf. A 500.	7.6 × 5.3 × 2.0 . .	Not worn . .	Made from a flake. Has a fine pointed end with a definite shoulder.
G-75	Awl-like tool .	6.0 × 4.2 × 2.2 . .	Slightly worn .	Half a pebble. Chipped on the back and sides to a short pointed end. Not typical.
*G-76	Do.	6.2 × 5.2 × 1.9 . .	....	Quartz flake. Fine point.

SITE H<sup>o</sup>.

*H <sup>o</sup> 8	Acheulean hand-axe.	13.2 × 8.4 × 4.5 Tongue-shaped.	Rolled . . .	Thick-butted, tapering towards a broad, thin end. Ventrally flat.
H <sup>o</sup> 3	Do. (?)	17.9 × 7.5 × 5.2 Lanceolate.	Yellowish patina; not rolled.	Granite with epidote. Stepped flaking, appearing as though cut by a sharp iron tool.
*H <sup>o</sup> 17	Do.	9.7 × 7.5 × 3.4 Ovate; thin.	Slaty blue . .	Crudely flaked. Large flakes removed.
H <sup>o</sup> 42	Do.	10.4 × 7.2 × 4.1 Ovate	Very slightly rolled; tip broken.	Flesh coloured quartzite. A crude tool.
*H <sup>o</sup> 44	Do.	11.4 × 7.6 × 3.6 Irregular.	Worn . . .	Transverse flaking. Ends battered. Rechipped in two places.
*H <sup>o</sup> 26	Do.	9.5 × 7.1 × 3.4 Ovate .	Do.	Crudely flaked.
*H <sup>o</sup> 11	Do.	8.4 × 7.2 × 3.3 Broad oval.	Do.	
H <sup>o</sup> 60	Do.	10.7 × 8.8 × 3.5 Irregular.	Do.	Greenish coloured.
H <sup>o</sup> 75	Do.	8.4 × 5.7 × 3.0 Almond-shaped.	Slightly weathered	Ventrally a large flake-scar. Sides chipped vertically in parts.
H <sup>o</sup> 35	Side-scraper .	6.7 × 5.9 × 2.2 . .	Do.	A thick triangular flake. A large oblique flake-scar gives a fine straight, sharp edge on the left.
*H <sup>o</sup> 51	Do.	9.3 × 6.2 × 3.3 . .	Do.	From a core, with a bevelled edge on the left.
*H <sup>o</sup> 2	Disc. . .	15.3 × 13.2 × 3.8 Thin .	Slightly rolled. Broken.	Finely flaked and sharp all along the edges.
H <sup>o</sup> 33	Do.	9.4 × 7.8 × 3.4 Not thin	Worn.	
H <sup>o</sup> 29	Do.	8.4 × 7.4 × 3.3 Not thin	Do.	



Field No.	Type.	Size and shape.	Condition.	Description.
H <sup>a</sup> 28	Chopper . . .	11.5 × 9.6 × 4.3 Thin. With a concavity on one side.	....	Made from a thin pebble. The concavity on the side is blunted by battering and may have been for the purpose of affording grip. Plate IV (a).
H <sup>a</sup> 73	Conical core . .	10.1 × 8.8 × 5.9 . .	Slightly worn .	Flat base. The conical part has long convergent flake-scars.
*H <sup>a</sup> 10	Elongated coroid	9.8 × 6.5 × 4.7 . .	Worn and heavy,	
H <sup>a</sup> 54	Do.	6.9 × 5.4 × 2.8 . .	Slightly worn.	
H <sup>a</sup> 18	Discoidal coroid	9.4 × 8.5 × 3.4 . .	Do.	
H <sup>a</sup> 23	Do.	7.9 × 6.2 × 3.5 . .	Worn and weathered.	
*H <sup>a</sup> 19	Do.	8.2 × 6.9 × 3.4 . .	Do.	
*H <sup>a</sup> 77	Do.	7.2 × 6.0 × 2.9 . .	Not worn.	
H <sup>a</sup> 53	Do.	5.9 × 5.8 × 3.9 . .	Slightly worn.	
H <sup>a</sup> 58	Do.	7.0 × 5.4 × 3.2 . .	Do.	
*H <sup>a</sup> 15	Do.	7.2 × 6.3 × 2.8 . .	Not worn.	
H <sup>a</sup> 62	Do.	7.3 × 5.3 × 3.3 . .	Worn.	
*H <sup>a</sup> 37	Do.	6.6 × 5.9 × 2.4 . .	Do.	
*H <sup>a</sup> 32	Do.	6.0 × 6.1 × 3.5 . .	Do.	Rechipped accidentally (?).
*H <sup>a</sup> 43	Chopper . . .	10.8 × 10.8 × 3.3 Roughly triangular.	Not worn . .	From a thickish flat flake. Sides still have pebble cortex. Narrow, nearly pointed, butt. The broad edge made thin by the removal of stepped flakes from both the dorsal and ventral sides of the edge.
H <sup>a</sup> 7	A right-angled flake.	11.0 × 8.9 × 3.4 Thick .	....	A thick flake. The angle between the two arms is flaked to give a hollow edge to serve as a spokeshave.
H <sup>a</sup> 67	Blade . . .	7.3 × 3.5 × 2.6 Thick .	Not worn . .	Made from a thick flake. Ventral side and "back" are single flake-scars. The dorsal face flaked.
H <sup>a</sup> 45	Flake planing tool	11.4 × 10.3 × 3.3 . .	Not weathered .	A thick, flat flake. Dorsal and ventral faces parallel. Sides except near the butt flaked nearly vertically.
H <sup>a</sup> 5	A small chopper	7.9 × 5.5 × 3.4 . .	Weathered . .	A pebble "backed" flake of uniform thickness. Oblique flaking along the lower margin.
*H <sup>a</sup> 1	Flaking tool . .	10.0 × 7.5 × 3.5 Ovate .	Do.	A hand-axe-like pebble; edges battered.
*H <sup>a</sup> 13	Worked flakes .	Small . . .	Worn.	
*H <sup>a</sup> 39	Do.	Do.	Do.	
*H <sup>a</sup> 57	Do.	Do.	Do.	
H <sup>a</sup> 9	Do.	Not small . . .	Do.	
H <sup>a</sup> 36	Do.	Do.	Weathered.	
H <sup>a</sup> 14	Do.	Do.	Not weathered.	
SITE H. <sup>1</sup>				
H <sup>1</sup> 9	Coroid . . .	6.2 × 5.5 × 2.7 . .	Worn . . .	Grey with black stain.
*H <sup>1</sup> 10	Core . . .	4.5 × 4.3 × 2.6 . .	Not worn.	
H <sup>1</sup> 7	Do. . . .	7.8 × 7.0 × 3.8 . .	Do. . . .	Pebble surface on one side.



Field No.	Type.	Size and shape.	Condition.	Description.
Site H <sup>2</sup> .				
*H <sup>2</sup> 35	Abbevillian hand-axe.	13.0 × 11.4 × 4.4 Nearly semi-circular.	Weathered; not rolled.	Made from the side of a pebble. Ventral face flat, but has several stepped flake-scars. Dorsally, towards the butt, the original pebble surface seen; three broad flake-scars intersect the flat ventral flaked surface.
H <sup>2</sup> 14	Disc (?)	13.5 × 12.2 × 5.4 Circular.	Weathered and rolled. Thick lateritised cortex.	A flakish pebble chipped along the margin and also ventrally. An unfinished tool.
H <sup>2</sup> 79	Abbevillian hand-axe.	9.3 × 5.4 × 4.2 Conical	Slightly worn	From a pebble. Thickest at the butt.
H <sup>2</sup> 2	Do.	10.4 × 5.8 × 4.8 Conical	Rolled	From a pebble. Coarse flaking. Thickest at the butt.
H <sup>2</sup> 16	Do.	12.6 × 8.4 × 4.0 Irregular; thin.	Not rolled	Made from a flat pebble. Coarsely worked.
*H <sup>2</sup> 34	Do.	12.8 × 6.9 × 4.1 Elongated.	Rolled and weathered; tip broken.	Do.
*H <sup>2</sup> 88	Do.	10.4 × 6.9 × 5.3 Ovate; thick.	Do.	Do.
H <sup>2</sup> 11	Acheulean hand-axe.	9.4 × 6.0 × 3.1 Almond-shaped.	Not rolled	Finely flaked all over. Several stepped flake-scars.
H <sup>2</sup> 36	Do.	10.0 × 6.4 × 3.4 Almond-shaped.	Very much worn and weathered.	Roughly flaked.
*H <sup>2</sup> 63	Do.	11.9 × 6.6 × 4.5 Lanceolate; thick.	Heavy	Do.
*H <sup>2</sup> 31	Do.	9.4 × 6.4 × 2.1 Ovate. Very thin.	Slightly weathered	Controlled and stepped flaking. Fine tool.
*H <sup>2</sup> 7	Acheulean chopper	13.5 × 8.7 × 4.4 Shaped like a big blade. "Backed".	Not weathered or rolled.	From a split pebble. Ventral surface flat and almost unworked. The dorsal face flaked transversely and also parallel to the edge. The long "back" at right angles to the plain of main axis. The cutting edge is formed by the intersection of the two long flake-scars along the edge dorsally, with the main flake-scar and one smaller flake-scar near the snout.
H <sup>2</sup> 15	Do.	12.2 × 9.1 × 3.6 Blade-like.	Do.	Made of a thick "backed" flake, the "back" having the original pebble surface. Plate IV (b).
*H <sup>2</sup> 8	Do.	12.6 × 9.5 × 3.8 Oval	Slightly rolled	Cf. above two, but made from the side of a pebble. The "back" is "prepared".
H <sup>2</sup> 3	Acheulean hand-axe.	10.8 × 8.3 × 3.0 Oval	Weathered; not rolled. Stained black.	Made from a flake. Flat on the ventral face. Fine stepped flaking on the dorsal face, especially near the pointed end. The side on the top right, flat and thicker than the rest of the edge. This feature relates this tool to the choppers, though the pointed end is the business end. This butt gives a better hand-grip or if the tool were hafted, a stronger hold for the haft. Perhaps some kind of padding might have been used to protect the palm if the tool were not hafted. Plate III (b).
H <sup>2</sup> 13	Elongated coroid	10.4 × 6.1 × 2.0	Rolled.	
*H <sup>2</sup> 28	Do.	8.4 × 5.8 × 4.0	Do.	
H <sup>2</sup> 92	Do.	9.0 × 5.2 × 3.2	Do.	



Field No.	Type.	Size and shape.	Condition.	Description.
*H <sup>2</sup> 91	Elongated coroid	9.9 × 7.6 × 4.7 . .	Rolled	
H <sup>2</sup> 60	Do.	7.9 × 5.9 × 3.6 . .	Do.	
*H <sup>2</sup> 71	Do.	7.9 × 6.3 × 3.2 . .	Do.	
H <sup>2</sup> 63	Do.	7.1 × 5.5 × 3.7 . .	Do.	
*H <sup>2</sup> 61	Do.	8.1 × 6.0 × 2.6 . .	Do.	
H <sup>2</sup> 12	Do.	9.7 × 6.6 × 3.6 . .	Do.	
*H <sup>2</sup> 24	Discoidal coroid	7.0 × 6.9 × 4.2 . .	Do.	
H <sup>2</sup> 93	Do.	7.1 × 5.5 × 2.9 . .	Do.	
*H <sup>2</sup> 57	Do.	8.2 × 6.4 × 2.5 . .	Do.	
H <sup>2</sup> 6	Do.	8.2 × 6.2 × 3.3 . .	Do.	
*H <sup>2</sup> 10	Do.	5.0 × 4.4 × 2.7 . .	Do.	
H <sup>2</sup> 55	Do.	7.3 × 6.1 × 3.6 . .	Do.	
*H <sup>2</sup> 69	Do.	7.3 × 6.2 × 3.1 . .	Do.	
H <sup>2</sup> 27	Do.	5.6 × 5.0 × 2.2 . .	Do.	
*H <sup>2</sup> 64	Do. ?	8.5 × 8.2 × 2.9 Thin	Worn . . .	Sides battered.
H <sup>2</sup> 23	Acheulean hand-axe or knife (?)	10.2 × 5.8 × 3.2 Lanceolate.	Weathered and slightly rolled. Stained back.	Made from a long pebble. Ventral face very little worked. Dorsal surface has a large flake-scar on the lower half of the right side, which produces a blade-like edge. The left half of the tool is narrower and looks like the handle of a knife. Plate V (j).
H <sup>2</sup> 73	Disc.	9.0 × 7.8 × 4.5 . . Thick.	Slightly rolled	
*H <sup>2</sup> 18	Core, Victoria West type.	11.3 × 9.0 × 4.3 . .	Weathered; Slightly rolled.	
H <sup>2</sup> 59	Pebble "flaker"	7.8 × 6.4 × 3.1 . .	....	Pebble flaked on the sides and edge battered.
*H <sup>2</sup> 53	Do.	....	Weathered; slightly rolled.	Do.
*H <sup>2</sup> 75	Do.	7.9 × 5.6 × 4.0 . .	Rolled; weathered; very smooth to the touch.	A thick flake, with a thick pebble-surfaced "back"; chipped along the edge as in the case of choppers; edge battered.
*H <sup>2</sup> 41a	Diminutive hand-axe.	8.9 × 5.9 × 2.5 Pear-shaped; Irregular.	Weathered; rolled	Made on a moderately thick flake.
*H <sup>2</sup> 30	Do.	7.9 × 6.1 × 2.9 Oval	Weathered; rolled; tip broken.	Finely and symmetrically flaked.
H <sup>2</sup> 41b	Do.	7.5 × 6.1 × 3.1 Oval	Weathered; rolled; tip blunted. Iron-stained.	Four symmetrical flake-scars on the dorsal face. Weathered very much.
H <sup>2</sup> 54	Do.	7.2 × 5.0 × 2.7 Pointed oval.	Fresh . . .	Made from a thick flake.
*H <sup>2</sup> 94	Do.	6.6 × 5.4 × 2.1 Pointed oval; thin.	Rolled; worn; tip broken.	Fine thin flakes.
H <sup>2</sup> 26	Side-scraper .	7.9 × 5.1 × 1.9 Thin	Not rolled; slightly weathered.	Thin stepped flakes. Thinner along one side than the rest.
*H <sup>2</sup> 22	Do.	8.0 × 6.4 × 2.2 Thin	Rolled . . .	Pebble-butted. Thin along one side.



Field No.	Type.	Size and shape.	Condition.	Description.
*H <sup>2</sup> 48	Hollow core-scraper.	6.0 × 3.9 × 2.5	Rolled	Flat-buttet core, shaped like a beak. A large oblique flake-scar gives the scraper edge.
H <sup>2</sup> 58	Do.	6.0 × 4.2 × 2.3	Not rolled	A core tool. Two flake-scars, ventral and dorsal, along the concave side meet to produce the business end. Crude.
*H <sup>2</sup> 84	Hollow-scraper	9.6 × 5.7 × 2.4	Do.	A flake, Cf H <sup>2</sup> 7. Worked on both the faces. Large flakes removed from the angle both ventrally and dorsally, which give the scraper edge.
*H <sup>2</sup> 95	Do.	6.4 × 4.9 × 1.8 Ovate	Rolled	A small hand-axe on a flake. One side concave and sharp-edged.
H <sup>2</sup> 47	Do.	6.6 × 4.9 × 1.8 Ovate	Do.	Side of a pebble. One side has a concavity due to a fairly large oblique flake-scar. Plate IV (j).
*H <sup>2</sup> 37	Hollow-scraper & side-scraper.	6.7 × 3.5 × 1.6 Blade-like.	Do.	Flake. One of the longer edges has the concavity. The opposite side retouched all along.
*H <sup>2</sup> 81	End-scraper on a blade-like flake.	9.2 × 4.7 × 2.1 "Duck bill" type.	Rolled. Tinted black	Made from a flake. Dorsal face has three flake-scars. Minute flaking seen near the business edge on the ventral face. Plate V (h).
*H <sup>2</sup> 42	End-scraper	6.4 × 2.6 × 2.0	Fresh	Made from a thick flake with the pebble surface on the dorsal side. Flaked near the tip on the dorsal face.
H <sup>2</sup> ?	Do.	4.9 × 2.7 × 1.4 "Duck-bill" type.	Do.	Made from a flake of bluish quartzite. Sharp all round except the butt, where the brown pebble surface is still seen. Plate V (g).
H <sup>2</sup> 96	End-scraper on flake.	5.7 × 5.1 × 1.4	Rolled	An irregular flake. The thicker arched side thinned to a scraper edge by sloping flakes.
*H <sup>2</sup> 51	End-scraper on a blade.	6.5 × 4.6 × 1.9	Fresh	Ventral surface flat. Dorsal face has three longitudinal flake-scars and some fine retouch. The scraper end thick as in "Duckbills".
H <sup>2</sup> 52	Blade	7.4 × 4.4 × 1.3	Rolled	Made from a thin flake. Longitudinal flakes dorsally. The main flake-scar unworked. Prepared striking platform.
*H <sup>2</sup> 19	Blade-like tool	7.6 × 4.0 × 1.9	Do.	Made from a thick "backed" flake. Cutting edge irregular and not straight, but finely flaked on both faces.
H <sup>2</sup> 80	Spear-head or awl-like tool on a flake.	6.0 × 4.0 × 1.5 Roughly pear-shaped.	Weathered. Broken	Thin flake, thicker at the pointed end. The point is thick, and the shoulder is not distinct as in the case of similar tools described under site A. This may have made a good spear-head.
H <sup>2</sup> 50	Planing tool	8.1 × 6.5 × 3.2 Roughly rectangular; thick.	Weathered. Slightly rolled.	Thick parallel-sided flake. The sides nearly vertical, with parallel flake-scars on the plane-edge.
*H <sup>2</sup> 21	Semi-lunar flake	8.0 × 6.5 × 2.5	Fresh. Not rolled	Bulb of percussion on ventral side. No prepared striking platform.
H <sup>2</sup> 32	Do.	13.5 × 10.9 × 3.4	Weathered. Not rolled.	
H <sup>2</sup> 9	Do.	11.6 × 8.2 × 2.1	Do.	



Field No.	Type.	Size and shape.	Condition.	Description.
SITE H <sup>2</sup> .				
*H <sup>2</sup> 1	Abbe-Acheulean hand-axe.	7.7 × 5.9 × 3.3 Ovale .	Weathered.	
H <sup>2</sup> 2	Do.	9.0 × 7.1 × 4.2 . .	....	
H <sup>2</sup> 4	Do. (1)	9.7 × 8.4 × 4.0 Roughly triangular.	....	Crude.
H <sup>2</sup> 3	Chipped pebble	7.6 × 6.3 × 5.3 . .	Worn . . .	One flake-scar on one face and two opposite.
SITE H <sup>4</sup> .				
*H <sup>4</sup> 1	Hand-axe. (Early Acheulean).	9.1 × 5.7 × 3.0 . .	Pink. Tip broken	Flaked on all sides.
SITE H <sup>5</sup> .				
*H <sup>5</sup> 22	Abbevillian-hand-axe.	10.2 × 10.6 × 4.7 Squat, pyriform.	Very slightly worn	Ventral face flat. Flaked boldly on the dorsal face. A broad short point.
H <sup>5</sup> 3	Do.	11.2 × 8.3 × 5.2 Oval, thick.	Worn and rolled .	Very crudely flaked.
*H <sup>5</sup> 8	Abbe-Acheulean hand-axe.	11.1 × 7.3 × 3.7 Lancesolate, thin.	Weathered and rolled.	Flaked on both faces. Thin broad, lower end.
H <sup>5</sup> 6	Do.	9.0 × 6.8 × 3.7 Ovale .	Do. .	Made from a half pebble. Pebble-butted.
*H <sup>5</sup> 18	Do.	9.5 × 7.0 × 3.3 Thick .	Do. .	Made from a thick flake. Flaked dorso-laterally.
*H <sup>5</sup> 4	Do.	11.7 × 7.2 × 3.0 Thin .	Not rolled . .	Made from a flake. Stepped flaking. Edges nearly straight.
H <sup>5</sup> 2	Do.	11.6 × 8.5 × 3.7 . .	Do. . .	Crude stepped flaking. Pebble surface at the butt.
H <sup>5</sup> 9	Do.	10.7 × 8.8 × 3.8 . .	Rolled and weathered.	Pebble-butted.
H <sup>5</sup> 17	Do.	13.2 × 7.6 × 2.9 Elongated oval.	Much rolled . .	Made from a flake. Dorsal face most worked. Edges blunted by rolling.
H <sup>5</sup> 34	Acheulean hand-axe.	10.8 × 7.2 × 2.2 Pear-shaped, thin.	Weathered, but not rolled.	Made from a thin flake. Elongated, thin, narrow point.
*H <sup>5</sup> 38	Do.	8.8 × 6.3 × 2.7 Thick .	Slightly rolled .	Elongated point.
*H <sup>5</sup> 24	Elongated coroid	7.9 × 6.2 × 4.6 . .	Rolled and weathered	
H <sup>5</sup> 14	Do.	9.4 × 6.4 × 3.3 . .	Not rolled.	
H <sup>5</sup> 40	..	7.4 × 4.8 × 1.9 . .	Do.	
*H <sup>5</sup> 36	Discoidal coroid	8.1 × 7.6 × 3.6 . .	Weathered; not rolled.	
*H <sup>5</sup> 23	Do.	9.4 × 7.4 × 3.3 . .	Not rolled.	
H <sup>5</sup> 30	Do.	7.0 × 5.5 × 3.3 . .	Rolled.	
H <sup>5</sup> 3	Do.	9.0 × 8.1 × 4.4 . .	Do.	
*H <sup>5</sup> 16	Core	8.6 × 7.8 × 2.7 Nearly discoidal.	Fresh . . .	Flaked all over. Lower end pointed.
H <sup>5</sup> 19	Disc.	8.4 × 6.8 × 2.3 . .	Rolled and worn .	Ventral face almost unworked.
*H <sup>5</sup> 7	Do.	9.0 × 7.2 × 2.9 . .	Weathered . .	Flake-scars on both faces.
H <sup>5</sup> 21	Do.	6.6 × 6.6 × 2.8 . .	Not weathered .	Made from a flake. Main flake-scar unworked.



Field No.	Type.	Size and shape.	Condition.	Description.
H <sup>3</sup> 15	Chopper . .	9.9×9.5×3.6 Irregular	Fresh . . .	Made from the side of a pebble. The straight butt and the ventral face still show pebble cortex. Transverse flaking dorsally. The left side further chipped along the edges.
*H <sup>3</sup> 1	Do. . .	10.5×9.1×3.2 Semi-circular.	Rolled . . .	Made from the side of a pebble. Butt and ventral surface have the pebble cortex. Butt, thick and flat. Flaked dorsally and on the edges.
*H <sup>3</sup> 32	Do. . .	11.0×7.5×3.0 Ovate.	Very slightly rolled	Made from a flake, with a thick butt. Retouching on the edges.
*H <sup>3</sup> 42	Large Clactonian-like flake.	14.9×10.7×3.0 Blade-like.	Fresh . . .	Looks so new and the edges so fresh that it appears to be not old. Striking platform flat at an angle of 100°.
H <sup>3</sup> 31	Hollow core-scraper.	7.4×6.2×4.4 . .	Rolled slightly and also slightly weathered.	Made from a core.
H <sup>3</sup> 29	Hollow scraper .	8.4×6.6×2.6 . .	Weathered and rolled	Made from a flake.
H <sup>3</sup> 37	Do. . .	6.5×5.2×2.1 Thin; triangular.	Rolled . . .	Do.
*H <sup>3</sup> 39	Thin flake-point .	7.5×6.8×1.8 Triangular; very thin.	Weathered, and a little rolled.	Thin flaking.
H <sup>3</sup> 35	Flake . . .	6.9×6.4×2.2 Triangular.	Slightly weathered.	Stepped sides.
H <sup>3</sup> 25	A worked flake .	9.8×6.5×3.4 . .	Not rolled; slightly weathered.	
SITE H <sup>3</sup> .				
*H <sup>3</sup> 3	Pebble tool of Pre-Stellenbosch type.	10.1×7.0×7.0 . .	Not rolled . . .	Pebble with the lower half crudely flaked, from the dorsal and ventral faces.
H <sup>3</sup> 65	Abbevillian-Acheulean hand-axe.	9.5×6.3×3.3 Ovate .	Rolled and worn .	Split half of a pebble. Very much rolled and smoothened. Two or three flake-scars near the lower pointed end.
*H <sup>3</sup> 19	Do. . .	9.5×6.1×3.0 Oval; thin.	Heavily rolled .	Thin tool. Crude stepped flaking.
H <sup>3</sup> 31	Acheulean hand-axe.	11.2×6.9×3.9 Elongated.	Slightly rolled .	Flat straight-butted. Thin longitudinal flake-scars on the ventral side, and two large flake-scars on the dorsal side. Lower end elongated and "shouldered".
*H <sup>3</sup> 8	Cleaver . . .	12.3×10.4×4.4 Roughly quadrangular. Squat.	Weathered; not rolled.	From a flake. Transverse section through the middle is an isosceles triangle.
H <sup>3</sup> 1	Do. . .	14.3×11.0×3.6 Inverted U-shape. Very thin.	Weathered; slightly rolled. Cutting edge broken.	Made from a thin flake from the side of a pebble. Edges thinned by flaking on both dorsal and ventral faces.
*H <sup>3</sup> 15	Do. . .	13.7×8.1×2.9 Shape cf. above but better made.	Not rolled . . .	Section parallelogram. Straight and parallel sides. Arched and blunted butt. Straight horizontal adze-like cutting edge. Ventral face very little worked.
H <sup>3</sup> 56	Hand-axe, with cleaver edge.	12.6×8.9×5.0 Irregular.	Rolled . . .	Made from an entire pebble. Large crude flaking.
H <sup>3</sup> 49	Elongated coroid	7.8×5.6×4.0 . .	Weathered.	



Field No.	Type.	Size and shape.	Condition.	Description.
H <sup>a</sup> 33	Elongated coroid	9.8×5.2×3.0 . .	Worn.	
H <sup>a</sup> 58	Do.	9.4×5.7×3.0 . .	Do.	
H <sup>a</sup> 38	Do.	10.7×7.2×3.4 . .	Do.	
H <sup>a</sup> 26	Do.	11.9×6.8×3.9 . .	Do.	
H <sup>a</sup> 27	Do.	9.5×7.7×5.7 . .	Do.	
*H <sup>a</sup> 48	Do.	10.6×7.9×4.8 . .	Slightly worn.	
*H <sup>a</sup> 36	Do.	8.2×5.4×3.0 . .	Worn.	
*H <sup>a</sup> 53	Do.	6.5×4.3×2.3 . .	Do.	
*H <sup>a</sup> 5	Do.	9.3×6.1×3.0 . .	Do.	
*H <sup>a</sup> 42	Do.	8.0×6.4×3.6 . .	Do.	
H <sup>a</sup> 47	Do.	7.4×4.7×2.2 . .	Do.	
H <sup>a</sup> 77	Do.	7.6×5.8×3.2 . .	Slightly worn.	
*H <sup>a</sup> 59	Do.	9.4×6.4×4.0 . .	Do.	
H <sup>a</sup> 46	Do.	9.9×6.7×3.6 . .	Do.	
H <sup>a</sup> 54	Discoidal coroid	7.1×6.4×3.2 . .	Highly worn.	
H <sup>a</sup> 28	Do.	7.5×6.3×3.0 . .	Do.	No alternate flaking.
*H <sup>a</sup> 29	Do.	6.0×5.3×2.1 . .	Worn.	
*H <sup>a</sup> 43	Do.	8.0×7.2×3.9 . .	Do.	
H <sup>a</sup> 23	Do.	7.9×5.7×3.0 . .	Slightly worn . .	Bluish white material. Irregular flaking but technique Acheulean.
*H <sup>a</sup> 44	Do.	7.3×5.4×3.4 . .	....	
*H <sup>a</sup> 4	Do.	7.4×6.2×4.3 . .	Very slightly worn.	
*H <sup>a</sup> 17	Do.	7.0×6.2×3.1 . .	Worn.	
H <sup>a</sup> 2	Do.	8.3×7.1×3.8 . .	Do. . . .	Alternate flaking.
H <sup>a</sup> 35	Do.	8.6×7.2×3.7 . .	Do. . . .	Do.
H <sup>a</sup> 50	Do.	7.7×8.0×4.0 . .	Worn and weathered	Do.
*H <sup>a</sup> 26	Do.	7.8×6.5×3.1 . .	Worn.	
*H <sup>a</sup> 9	Do.	7.0×6.6×4.9 . .	....	Core; one side pebble surface.
H <sup>a</sup> 55	Do.	7.7×6.1×3.0 . .	Worn and weathered	Irregular flaking.
*H <sup>a</sup> 22	Broken hand-axe	7.9×6.0×3.1 . .	Slightly weathered.	
*H <sup>a</sup> 66	Disc.	9.1×8.0×4.6 . .	Weathered and worn	Fine, long flaking.
H <sup>a</sup> 6	Longish hand-axe (?)	10.3×5.5×2.6 . .	Worn. Tip broken	The material is light blue quartzite but the patina on it is pinkish.
*H <sup>a</sup> 41	Diminutive hand-axe.	8.4×5.6×3.7 . .	Worn . . . .	Fine flaking. One side battered.
H <sup>a</sup> 30	Do.	9.5×6.2×2.3 Oval .	Do. . . .	Very thin, fine flaking. Pebble-butt, straight and nearly flat, but at an angle to the main axis.
*H <sup>a</sup> 74	Do.	7.8×5.3×2.1 Elongated; thin.	Do. . . .	Thin flaking.
H <sup>a</sup> 52	Do.	8.2×5.7×2.2 Oval .	....	Do.
*H <sup>a</sup> 76	Do.	6.6×6.4×2.3 Triangular.	Worn . . . .	Made on a flake. A boring tool.



Field No.	Type.	Size and shape.	Condition.	Description.
H <sup>2</sup> 20	Hollow core-scraper.	8.3 × 5.7 × 2.6 . .	Worn . . .	Roughly triangular hand-axe-like tool, with the right side specially thinned and having a concavity.
H <sup>2</sup> 16	Do.	8.0 × 5.5 × 3.1 . .	Do. . . .	A diminutive hand-axe, one edge with a concavity.
*H <sup>2</sup> 60	Do.	8.3 × 6.1 × 2.8 . .	Do. . . .	Do.
H <sup>2</sup> 69	Do.	6.7 × 5.3 × 2.4 . .	Do. . . .	Made from a flake. One side thinned by flaking both dorsally and ventrally.

SITE H<sup>7</sup>.

H <sup>7</sup> 1	Abbe-Acheulean hand-axe.	12.2 × 9.9 × 4.6 Irregular, oval.	Fresh. Not rolled	Quartzite with coarse grains.
*H <sup>7</sup> 2	Core . .	7.9 × 6.3 × 3.0 . .	Do. Do. .	An old worked core, with later chipping along a bevelled edge.

SITE H<sup>8</sup>.

*H <sup>8</sup> 1	Disc. Acheulean flaking.	9.0 × 7.4 × 4.4 . .	Slightly weathered; not rolled. Broken.	
H <sup>8</sup> 2	Pebble chopper .	8.6 × 7.0 × 3.6 . .	Not rolled . .	Fine controlled flaking mainly along one side.
H <sup>8</sup> 3	Core . .	5.6 × 4.6 × 2.6 . .	Rolled and weathered	One side concave. May have served as a spokeshave.

## SITE I.

*I-1	Cleaver . .	11.0 × 8.2 × 4.6 Thick .	Very slightly worn	Made from a thick flake, thicker at the butt-end. Butt flat, nearly horizontal. Ventrally flat with transverse step-flaking. Dorsally, only two long flake-scar, the median one intersecting the main ventral flake-scar producing the straight cutting edge.
I-10	Chopper from a pebble.	7.3 × 6.1 × 3.8 . .	Not rolled . .	Butt and ventral surface have the original pebble cortex. Dorsally the arched edges are bevelled by chipping.
*I-3	Disc. . .	7.1 × 7.0 × 2.8 . .	Do. . . .	Rough, but small flake-scars.

SITE I<sup>1</sup>.

*I <sup>1</sup> -28	Abbevillian-Acheulean hand-axe.	10.5 × 7.2 × 3.8 Oval .	Not rolled . .	Crudely flaked, finer flaking along the edges.
I <sup>1</sup> -29	Acheulean hand-axe.	11.1 × 9.2 × 3.9 Broad, oval.	Worn and weathered. Tip broken.	Fine tool with the S-twist. Flaked all over. A few stepped flakes. Thicker at the butt-end.
*I <sup>1</sup> -27	Do. . .	11.0 × 9.3 × 4.0 Broad, oval.	Not rolled; very slightly weathered.	Made from a flat pebble. The butt region and the left half of the dorsal surface still have the original pebble cortex. Large, thin flakes removed.
*I <sup>1</sup> -33	Elongated coroid	9.3 × 5.8 × 3.9 . .	Slightly rolled; broken.	
I <sup>1</sup> -36	Do. . .	7.9 × 5.3 × 2.3 Elliptical.	Weathered and extremely worn.	Rather thin. Edges all blunted by wearing.
*I <sup>1</sup> -4	Discoidal coroid	6.6 × 6.4 × 3.5 . .	Not much rolled.	
I <sup>1</sup> -5	Do. . .	7.3 × 5.7 × 3.2 . .	Do. . . .	Alternate flaking.
*I <sup>1</sup> -25	Core . .	7.6 × 6.4 × 5.0 . .	Do. . . .	



Field No.	Type.	Size and shape.	Condition.	Description.
P-40	Core . . .	7.4 × 6.9 × 3.0 . . .	Not much rolled; somewhat weathered.	
P-18	Do. . . .	6.1 × 4.1 × 3.1 . . .	Fresh looking.	
P-21	Do. . . .	7.6 × 5.2 × 4.2 . . .	Weathered, not rolled. Broken.	Waste.
P-13	Do. . . .	5.5 × 4.5 × 2.8 . . .	Rolled and weathered.	
*P-39	Core, thin . . .	5.6 × 4.9 × 2.0 . . .	Do.	
P-31	A diminutive hand-axe.	6.6 × 5.4 × 2.8 Ovate . . .	Rolled and weathered. Whitish crust.	Very few flake-scars.
*P-20	Do. . . .	7.2 × 6.0 × 2.7 Broad; oval; thin.	Rolled and weathered.	Made from a flake. Worked only on the ventral side. Flake-scars all worn.
P-1	Flake scraper . . .	8.0 × 5.6 × 1.6 Thin . . .	Not rolled, but weathered.	Made from a thin flat flake. Looks like a thin cleaver, with bevelled edges. Thin long flaking.
*P-15	End-scraper . . .	6.2 × 5.2 × 2.2 . . .	Slightly rolled . . .	Made from a flake. Stepped flaking on the dorsal face on the sides and the lower end. The latter thinned by flaking dorsally and ventrally.
P-3	Worked flake . . .	7.2 × 6.3 × 3.3 . . .	Broken. Weathered.	

## SITE J.†

J-4	Abbevillian hand-axe.	13.4 × 8.7 × 4.8 Pear-shaped.	Fresh-looking . . .	Made from half a pebble. The main flake-scar unworked. Three large flake-scars near the lower end.
*J-2	Do. . . .	11.2 × 7.5 × 4.2 Pear-shaped.	Fresh-looking. Tip broken.	Cf. above, but more flaked and has more elongated point.
*J-27	Do. . . .	9.9 × 9.7 × 4.7 Triangular.	Fresh . . .	Pebble-butted. Two large flake-scars dorsally. Ventral face flat, with a few stepped flake-scars.
*J-12a	Do. . . .	8.5 × 6.2 × 2.9 . . .	Not rolled . . .	Made from a split pebble.
*J-20	Do. . . .	11.4 × 6.7 × 3.3 . . .	Do. . . .	Half a pebble. Three large flake-scars on the lower end of the pebble surface.
J-13	Do. . . .	9.5 × 5.8 × 3.6 Oval . . .	Do. . . .	Pebble-butted. Ventrally one large flake-scar, flaked by a smaller one. Dorsally, bold transverse flake-scars. Rounded tip.
J-5	Do. . . .	9.1 × 6.3 × 4.4 Irregular	Do. . . .	Pebble-butted. Crudely flaked. Thickest at the butt.
*J-12	Abbevillian-Acheulean hand-axe.	10.7 × 8.2 × 3.9 Pointed oval.	Slightly weathered; not rolled.	Pebble-butted. Fine thin point. Ventrally flat. Thin stepped flakes removed.
J-8	Do. . . .	9.7 × 7.3 × 3.7 Ovate . . .	Do. . . .	Cf. above, but point not so elongated. Stepped flake-scars near the tip.
J-6	Do. . . .	9.1 × 5.3 × 2.5 Elongated oval.	Do. . . .	Made from half a pebble. Right half of the dorsal face has the original pebble cortex; left half and the lower end flaked. Thin flakes ventrally; crude flaking.
J-27a	Do. . . .	8.8 × 6.8 × 3.1 Thin . . .	Nearly fresh; not rolled. Tip broken.	Made from the side of a pebble. Finely flaked all over except for a small area near the butt.
*J-7	Do. . . .	9.0 × 6.5 × 3.1 Oval, thin	Not rolled . . .	Pebble-butted. Stepped flaking.

† J, J<sup>2</sup> and J<sup>3</sup> have been treated as one.



Field No.	Type.	Size and shape.	Condition.	Description.
J-3	Abbevillian-Acheulean hand-axe.	10.9 × 7.4 × 3.6 . . .	Not rolled . . .	Straight pebble-butt. Dorsally, transverse flakes. Ventrally, two large flake-scars, meeting on a median longitudinal ridge.
J-10	Acheulean hand-axe.	10.3 × 5.8 × 3.5 Elliptical.	Do. . .	Made from a pebble. Dorsal face has the original pebble cortex, and a large flake-scar. Ventrally minute flake-scars. Lower end thin.
J-3/1	Do.	8.5 × 6.3 × 2.4 Oval . . .	Do. . .	Pebble-butt. Very fine controlled and stepped flaking.
*J-11	Do.	8.5 × 5.0 × 2.8 Roughly triangular.	Do. . .	A very fine tool. Triangular in transverse section through the middle. Ventral face flat, with thin longitudinal flake-scars near the lower end, and transverse ones near the upper. Dorsal face has mostly oblique flaking. Would have made an excellent lance head.
*J-8	Do.	7.7 × 5.5 × 2.6 Pear-shaped; thin.	Do. . .	Thin hand-axe-like tool. Ventral face flat, and a few large thin flake-scars.
*J-10	Acheulean chopper	7.7 × 7.2 × 2.5 Thin . . .	Do. . .	Pebble butt. Thin flaking. Sharp on the sides and the lower edge.
*J-51	Coroid . . .	9.4 × 8.3 × 3.5 Round . . .	Do.	
J-54	Do.	9.3 × 7.7 × 3.6 . . .	Do.	
*J-45	Do.	8.9 × 7.0 × 4.4 . . .	Do.	
J-77	Do.	6.9 × 5.4 × 2.6 . . .	Do. Fresh.	
*J-18	Hollow-scraper . . .	9.8 × 6.3 × 2.7 Blade-like.	Not rolled; slightly weathered.	A flake with pebble "back". Cutting edge produced by a fairly large oblique flake-scar.
J-9	Side-scraper . . .	7.3 × 5.5 × 2.4 Ovate . . .	Do. . .	A diminutive hand-axe, flat ventrally; one side made thinner by transverse flaking.
J-15	Large boring tool	9.6 × 5.8 × 2.9 Crescent-shaped.	Not rolled or weathered.	Made from a flake from the corner of a pebble. Ventral face irregular, and hollowed near the lower margin. Dorsally, right and upper parts have the original pebble surface. Fine stepped flaking towards the left corner and lower margin. The latter forms a hollow cutting edge and the pointed end on the left a boring point.
J-16	Pick . . .	12.7 × 5.0 × 2.4 Crescent-like.	Slightly weathered but not rolled.	Made from a curved flake, thicker on the outer edge. The ventro-lateral margin transversely flaked. The rest of the ventral surface is formed by the main flake-scar. Dorsally large transverse flakes removed. The scars meet in a median ridge running zig-zag. Sharp point. The implement has the appearance of having been made by the Victoria West technique. Plate V(l).
*J-9	A worn flake similar to the above.	8.4 × 3.4 × 2.3 . . .	Very much worn . . .	Such flakes are occasionally seen in the field. This flake is too worn to say if it is artificial or not.
*J-59	End-scraper . . .	5.5 × 3.0 × 1.5 Blade-like.	Not rolled . . .	Blade-like flake. Finely flaked on the dorsal side. Obliquely flaked near the end both ventrally and dorsally.
J-64	Hollow-scraper . . .	6.4 × 4.6 × 1.6 Blade-like.	Do. . .	From a flake. Business edge hollowed by an oblique flake-scar which intersects the main flake-scar. The convex edge opposite is finely chipped.



Field No.	Type.	Size and shape.	Condition.	Description.
*J-1	Hollow scraper (?)	7.0×5.5×2.0 Blade-like.	Not rolled but weathered.	From a flake. Ventral face unworked. Three longitudinal flake-scars on the dorsal face.
J-36	A boring tool on a flake.	8.3×5.6×2.8 . .	Not rolled . .	Made from a flake. The main flake-scar (ventral side) unworked. Left half of the dorsal face is one large flake-scar, which intersects the main flake-scar to produce the straight edge on the left. The tip (lower end) is drawn into a fine point. Plate V (c).
*J	Point . . .	7.1×6.0×2.0 Ovate .	Tip broken . .	Quartz. Flake, hand-axe-like.
J-56	Awl-like tool (?)	5.2×3.6×2.1 Beak-like	..	Quartz. A split pebble. The elongated point is natural, not produced by chipping.
J-81	Do. . .	4.8×3.8×2.0 . .	..	Quartz pebble. Chipped to a fine point.
*J-17	Worked flake .	....	Fresh.	
*J-71	Do. . .	....	Do.	
J-72	Do. . .	Thin . . .	Do. . .	Quartz.
J-23	Do. . .	....	Do.	
J-43	Do. . .	....	Weathered.	
J-29	A huge flake, unworked.			

## SITE K.

K-33	Abbevillian hand-axe.	13.5×9.2×5.6 Elongated; irregular; thick.	Yellowish brown patina; tip broken; slightly rolled.	Made from a core. Bold, oblique and transverse flaking. Flaking on the butt also.
*K-31	Do. . .	12.1×8.8×5.0 Oval .	Do. . .	Made from a core.
K-37	Do. . .	12.7×10.2×5.0 Oval .	Yellowish patina as in No. 33 above.	Made from a pebble. The butt has got the blood red crust of the original pebble. Ventral face flaked obliquely towards a median ridge. Dorsally, irregular flaking.
*K-41	Do. . .	11.5×6.8×3.7 Irregular; oval.	Yellowish patina; slightly rolled.	Made from a core. Some stepped flakes. Crude.
*K-29	Do. . .	12.7×9.2×4.2 Oval .	Yellowish patina; not rolled.	Made from the side of a pebble, the cortex of which is seen on the butt and on the dorsal face, except near the lower end where there are two large flake-scars. Ventral face flat, with a few large flake-scars.
*K-32	Later Abbevillian hand-axe.	14.7×9.7×5.0 Elongated oval.	Not rolled; yellowish brown patina; tip broken.	Made from the core of a pebble, the cortex of which is seen on the butt. Thicker at the butt. Transverse flaking towards a median longitudinal rib present on either face.
K-23	Do. . .	10.6×8.0×4.4 Pear-shaped; thick.	Rolled. Patina as above. A bit recently chipped off from near the tip shows greyish blue quartzite.	Core tool. Thin flaking. Deep stepped flake-scar on the left side, dorsally. Roughly triangular in section. Lower end is a fine point.
*K-54	Do. . .	10.2×7.9×3.6 Oval; not thick.	Not rolled; brown patina.	Made on a flat pebble the crust of which is present on the butt. Fine flaking near the tip.



Field No.	Type.	Size and shape.	Condition.	Description.
K-30	Later Abbevillian hand-axe.	10.0 × 7.5 × 3.1 * Pear-shaped.	Very slightly rolled; yellowish brown patina; tip broken.	Made from a thin core. Pebble-butted. Thin long flakes. Also stepped flake-scars. Nearly Acheulean, though crude.
K-39	Acheulean lance-head.	12.5 × 6.3 × 3.5 Lanceolate.	Not rolled; brown patina present.	A fine lance-head. Ventral surface flat. Dorsally arched. The point is made by longitudinal flake-scars. Plate III(f).
K-2	Worked bit.	7.5 × 6.6 × 2.7	Yellowish brown patina.	
K-46	Disc	9.9 × 7.6 × 2.8 Oblong	Rolled; yellowish brown patina.	Roughly chipped along the edges. <sup>1</sup>
*K-63	Do.	10.5 × 9.3 × 4.9	Yellowish brown patina. Weathered.	
K-27	Acheulean hand-axe.	13.8 × 7.5 × 5.1 Elongated oval.	Not rolled. Very little weathered compared to the artifacts in the first series. Reddish brown.	Made from a core. Bold flaking on the ventral side. Long thin convergent flake-scars dorsally. Thickest just below the butt. Plate III(e).
K-40	Do.	11.4 × 6.9 × 3.6 Oval	Not rolled; reddish brown.	Made from a split pebble. Ventral surface flat. Thin broad lower end.
*K-49	Do.	8.2 × 6.0 × 3.3 Oval	Rolled; reddish brown.	Made from a small pebble.
*K-50	Do.	7.6 × 6.2 × 3.5 Oval	Rolled; yellowish brown.	Made from a small pebble.
K-60	Core	11.6 × 11.1 × 4.3 Almost tabular.	Not rolled; reddish brown.	A flat core. The sides are flaked nearly vertical.
*K-55	Disc	9.6 × 8.7 × 3.8	Very slightly rolled; reddish brown.	Made from a pebble.
*K-13	Cleaver	11.5 × 9.4 × 3.5 U-shaped.	Fresh looking; not weathered; flesh coloured quartzite.	Made from a moderately thick flake. Ventral face little worked. Dorsal face has thin oblique flake-scars near the butt. There is a flat area which forms the main dorsal flake-scar which intersects the smaller flake-scars near the lower margin of the ventral face. Tool damaged.
*K-26	Do.	10.7 × 8.4 × 4.9 Trapezoid.	Fresh looking; patch of brown patina.	Made from pebble core. Flat horizontal butt. Oblique cutting edge. Sides parallel.
K-52	Pebble-butted hand-axe.	10.2 × 7.9 × 4.4	Reddish; flesh coloured quartzite; tip broken.	Transverse flaking. Crude.
*K-42	Chopper	12.4 × 9.2 × 4.3	Mottled white and red patina; purple quartzite.	Side of a pebble. The pebble side has been chipped on the arched lower edge. Stepped flaking.
K-5	Cleaver	10.3 × 7.8 × 3.1 U-shaped, but broader at the cutting edge.	Mottled red and white patches on the bluish quartzite.	A curved flake. Arched butt and cutting edges. Stepped flaking on the sides. Thin flake-scars on the lower margin which intersect the main ventral flake-scar.
K-6	A cleaver. Cf. K-5	9.1 × 7.4 × 3.0	Cf. K-5.	
K-1	Point	8.3 × 7.9 × 3.0	Cf. K-5. Slightly rolled.	On a thick flake. Stellate pattern made by four flake-scars dorsally.
K-34	Hand-axe	12.4 × 8.4 × 5.1 Oval	Nearly fresh	Made from the side of a pebble. Original pebble cortex on the lower half of the dorsal surface. Roughly flaked ventrally. The business end formed by the intersection of the pebble cortex and ventral flake-scars.

<sup>1</sup> The above 12 are the oldest-looking tools.



Field No.	Type.	Size and shape.	Condition.	Description.
*K-38	Cf. above . . .	9.0×6.0×3.0 Oval . . .	Nearly fresh . . .	Made from a split pebble. Unflaked on the ventral surface.
*K-51	Crude hand-axe . . .	8.9×8.5×4.7 . . .	Do. . . .	From the side of a pebble. Lower half only flaked. Stepped scars.
*K-57	Do. . . .	12.3×7.3×3.4 . . .	Do. . . .	From a flake. Very roughly flaked, but finer retouching towards the point.
*K-53	Hand-axe . . .	9.0×7.6×4.2 Disc-like; thick. . . .	Fresh . . . .	Pebble surface at the butt.
*K-45	Do. . . .	9.3×8.7×3.9 . . .	Broken . . . .	Made from a flake.
K-47	Do. . . .	9.7×8.0×3.8 Disc-like. . . .	Very little weathered . . . .	Finely flaked. Some stepped flaking.
K-62	Disc, Acheulean . . .	12.5×11.8×5.3 . . .	Fresh. Broken . . . .	Finest in the series. Transverse flaking.
K-44	Chopper. Acheulean. . .	11.4×9.8×5.9 Broad oval. . . .	Very fresh . . . .	Rather irregular shape. Pebble crust at the butt, and half of the dorsal surface. Dorsally four short flakes removed along the cutting edge. Ventrally flat, with three large longitudinal flake-scars. Heavy tool, perhaps usable also as a planing tool. Plate III(j).
K-24	Worked core . . .	7.2×6.3×3.3 . . .	Do. . . .	
*K-61	Roughly worked core. . .	9.6×8.1×4.2 Triangular. . . .	.... . . .	Resembles hand-axe.
K-59	Worked core . . .	11.4×9.4×5.3 cone; thick. . . .	Fresh . . . .	An unfinished hand-axe (?). Very rough flaking. Ventral face nearly flat.
*K-21	Do. . . .	7.5×5.9×3.1 Oval . . .	Do. . . .	
K-48	Worked flake . . .	6.6×5.9×2.4 . . .	Slightly weathered; not rolled. . . .	Very thin flaking.
K-10	Roughly flaked pebble. . .	.... . . .	No patina. . . .	
K-35	Do. . . .	.... . . .	Do. . . .	
*K-36	Do. . . .	.... . . .	Greyish patina in patches. . . .	

SITE K.<sup>1</sup>

*K <sup>1</sup> .12	Abbevillian hand-axe. . .	12.9×9.5×4.4 Moderately thick. . .	Yellowish brown patina; rolled; tip broken. . .	Bold free flaking all over . . .
K <sup>1</sup> .2	Do. . . .	11.6×6.8×4.7 Elongated; lanceolate; thick. . .	Mottled yellowish and reddish brown patina. . .	Bold free flaking. Only seven or eight flakes-scars on both the faces together. . .
K <sup>1</sup> .14	Do. . . .	12.0×8.7×4.9 . . .	Broken half only . . .	Bold free flaking. . .
*K <sup>1</sup> .8	Worked core . . .	10.7×8.7×4.2 . . .	Brown patina; highly worn. . .	Unfinished hand-axe (?). . .
*K <sup>1</sup> .6	Broken bit of a hand-axe. . .	9.7×8.7×3.9 . . .	.... . . .	Flat horizontal, unworked butt. Stepped flaking on the sides. . .
K <sup>1</sup> .5	A lumpy hand-axe. Abbe-Acheulean. . .	8.9×8.5×5.5 U-shaped . . .	Brown patina . . .	Flat oblique pebble-butt. Several stepped flake-scars. . .



Field No.	Type.	Size and shape.	Condition.	Description.
K <sup>3</sup> -10	A lumpy hand-axe, Abbe-Acheulean.	10.1 × 8.1 × 4.6 . . .	Tip broken; dark brown patina.	Flat pebble butt.
K <sup>3</sup> -11	Late Abbevillian hand-axe.	13.6 × 9.5 × 4.8 Tongue-shaped.	Yellowish brown patina.	Horizontal, flat pebble-butt. Transverse section parallelogram.
*K <sup>3</sup> -3	Small hand-axe. Late Abbevillian.	8.4 × 5.7 × 3.7 . . .	Slightly rolled; thin whitish patina; tip broken.	Made from a core. Fine flaking.
*K <sup>3</sup> -13	Abbe-Acheulean hand-axe.	11.4 × 9.2 × 5.1 U-shaped	Yellowish brown patina.	Series of stepped flake-scars. Butt, horizontal, formed by a large hollow flake-scar.
*K <sup>3</sup> -1	Do.	10.8 × 8.9 × 4.8 Ovale .	Yellowish brown patina; tip broken.	
K <sup>3</sup> -4	Worked flake .	9.3 × 7.4 × 3.6 . . .	Very fresh.	

## SITE L.

*L-1	Abbe-Acheulean hand-axe.	14.8 × 10.0 × 5.5 Pear-shaped.	Not rolled; fresh; tip broken.	Reddish quartzite. Thick pebble-butt. Tapering to a fine point. The faces nearly flat. A very long longitudinal flake-scar, with three obliquely transverse, smaller ones on the ventral face. Dorsally, oblique flaking near the pointed tip.
L-2	Do.	12.5 × 8.2 × 4.0 Irregular.	Not rolled; slightly weathered.	Reddish quartzite. Made from a flake (?). Pebble cortex at the butt. Ventral surface has two oblique flake-scars on the main flake-scar. Dorsally, transverse flaking on the tongue-like lower end.
*L-32	Flake chopper. Abbe-Acheulean.	10.0 × 8.6 × 4.1 Inverted U-shape; thick.	Slightly rolled; weathered.	Made from a flat-based core. Thickest in the middle. Cutting edge adze-like.
L-7	Abbevillian-Acheulean hand-axe.	14.2 × 9.3 × 5.0 Elongated oval.	Not rolled; slightly weathered; mottled reddish, yellow and white tints.	Reddish quartzite. Made from a thick flake. Little worked ventrally. Dorsally two long flake-scars for the entire left half and three transverse ones on the right, the two meeting in a high median ridge. Transverse section triangular.
*L-3	Do.	14.9 × 8.8 × 4.3 Elongated oval.	Do.	Almost similar to the above.
*L-5	Do.	10.1 × 7.5 × 3.7 Oval .	Yellowish brown patina with reddish patches; tip broken.	Crudely flaked all over.
*L-4	Do.	11.0 × 7.3 × 4.1 Oval .	Yellowish brown patina; slightly rolled.	Pebble cortex on the flat upper end. Stepped flaking on the right side. A crude tool.
*L-9	Hand-axe. Early Acheulean.	10.9 × 8.9 × 5.2 Oval .	Not rolled; yellowish brown patina; tip broken.	Coarse grained material. Flaked all over.
L-13	Do.	11.7 × 8.1 × 4.6 Oval .	Not rolled; fresh; tip broken.	Reddish tinted material. Pebble butt. Flake-scars not conspicuous partly due to the coarseness of the material and partly to the thin flaking.
L-6	Do.	12.0 × 8.2 × 4.6 Oval .	Not rolled . . .	Finely flaked all over. Transverse flaking dorsally.
L-20	Acheulean hand-axe.	8.7 × 6.6 × 2.8 Oval; thin.	Yellowish brown patina; tip broken.	Small hand-axe. Flaked all over.



Field No.	Type.	Size and shape.	Condition.	Description.
L-8	Acheulean hand-axe.	9.3×8.1×4.5 Squat; pear-shaped.	Not rolled; slightly weathered.	Flat, straight, horizontal pebble butt. Flaked on either face. Working end, fine and pointed.
L-31	Do. (?)	8.5×5.6×3.0 Irregular	Not rolled; slightly weathered; yellowish brown patina.	Crudely flaked all over. One side concave.
*L-11	Do.	8.8×5.9×3.0 Elongated oval.	Worn; weathered; brown with grey dots.	Finely flaked all over.
*L-14	Do.	9.3×6.5×3.9 Pointed oval.	Worn; brown patina	A core, with rough step flaking. End a thick point.
*L-21	Coroid	8.7×6.7×4.1.		
L-18	Elongated coroid	9.6×7.3×4.7	Worn and weathered. Reddish and yellowish brown crust all over. Red showing through parts where the brown layer has been battered off.	Crudely flaked all over.
L-17	Do. (?)	9.7×6.8×3.5.		
*L-15	Coroid, discoidal	8.5×8.2×4.0.		
*L-22	Do.	8.0×6.8×3.6.		
L-23	Do.	6.8×6.1×3.4	Worn. Brownish patina.	
*L-24	Do.	7.0×6.6×3.2.		
L-27	Do.	9.8×7.5×5.3	Rolled. Brownish patina.	
*L-28	Do.	9.1×7.4×4.5.		
L-30	Do.	9.0×7.5×3.7	Slightly rolled. No patina.	
L-25	Core	8.5×6.2×4.0	Slightly worn; brownish patina.	With stepped flake-scars along the margin.
*L-26	Do.	9.7×7.1×3.4	Worn.	
*L-34	Worked flake	6.5×6.9×2.0	Fresh.	
L-37	Do.	9.3×6.9×2.7	Do.	
L-12	Unfinished hand-axe.	9.5×7.6×3.9	Worn and weathered	Made from a pebble.
*L-16	Do.	11.0×8.0×3.4	Do.	Made from a thick flake.
L-33	Cleaver	12.9×7.2×3.6	Worn and weathered; yellowish brown; working edge battered.	Made from a long flake.

## SITE M.

M-5	Disc	9.2×9.1×3.5 round.	Nearly Rolled	Bluish grey quartzite. Made from a flat flake.
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SITE M.<sup>1</sup>

M <sup>1</sup> -6	A, large flake.	9.2×8.6×2.6 Oval	Weathered	Thin flake. Light red quartzite.
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Field No.	Type.	Size and shape.	Condition.	Description.
SITE N.				
N-62	Late Abbevillian hand-axe.	17.0×10.9×5.7 Broad, ovate.	Not weathered; almost fresh.	Made from a pebble. Thick butt with the original pebble cortex on it. Tapering to a flat pointed end. Ventral surface flat and unworked except near the tip. More worked dorsally.
*N-61	Do.	11.2×8.8×5.3 Oval; triangular transverse section.	Slightly rolled; tip broken.	Made from a split pebble. Butt has the original pebble cortex. Worked on both faces, but more on the roof-shaped dorsal face.
*N-5	Do.	12.7×7.2×4.0 Lancesolate.	Worn . . .	Symmetrically flaked on both the faces. Transverse section nearly trapezoid.
N-9	Do.	12.3×7.7×3.7 Irregular.	Not rolled or weathered; almost fresh.	Crude.
N-8	Do.	10.2×6.4×3.6 . . .	Do. . .	Cleaver-like. Crude stepped flaking.
*N-43	Do.	9.4×8.6×3.4 . . .	Do. . .	Broken fragment of a hand-axe, made from a split pebble.
N-32	Early Acheulean hand-axe.	10.4×6.2×3.4 . . .	Not rolled . . .	Made of a flake from the side of a pebble. Half of the ventral face has the pebble cortex. Irregularly flaked. Several stepped scars.
*N-4	Do.	11.7×7.7×3.6 Oval; thin.	Do. . .	Several thin oblique flake-scars on the ventral face near the pointed lower end.
N-6	Do.	9.3×7.4×3.2 Oval; thin.	Not rolled; fresh . . .	Roughly flaked all over.
*N-17	Do.	8.4×7.6×3.0 . . .	Not rolled; broken half only.	Large, thin flakes struck off.
*N-14	Do.	14.4×9.1×4.0 Thin . . .	Tip broken . . .	Thin. From a flake. Worked on both faces. Large transverse flake-scars.
N-71	Pebble chopper . . .	11.4×9.5×4.6 . . .	Fresh . . .	Large flat pebble with lower end alone flaked, both dorsally and ventrally. Has a superficial likeness to pre-Stellenbosch pebble tools. Plate IV(c).
*N-45	Late Acheulean hand-axe.	10.4×6.6×2.6 Thin . . .	Not rolled; fresh; tip broken.	Made from a thin flake. A very small patch of the original pebble cortex on the dorsal face which has convergent flake-scars.
N-3	Do.	10.4×7.6×2.1 Oval; thin.	Not rolled . . .	Made from a very thin flake. The pebble cortex seen on the dorsal face. Stopped flaking particularly near the pointed lower end.
*N-7	Acheulean hand-axe.	8.2×4.2×3.8 Elongated oval.	Slightly worn . . .	A well-made diminutive tool, made from a core. Roughly rhomboidal in transverse section through the thickest part which is slightly below the butt. Edge drawn to narrow flat point. Convergent flakes on the dorsal face. Somewhat irregularly flaked ventrally. Both faces have a median longitudinal ridge.
N-1	Point or hand-axe. Technique cf. above.	8.0×6.3×2.3 Roughly triangular.	Not rolled or weathered.	Made from thin flake. Finely flaked. Several stepped flake-scars near the pointed end.
*N-2	Small hand-axe. Late Acheulean.	7.8×5.9×3.3 Oval; thick.	Do. . .	Series of minute flake-scars along the left margin.



Field No.	Type.	Size and shape.	Condition.	Description.
N-23	Chopper. Advanced Acheulean.	10.5×9.4×3.8 Broad oval.	Not rolled or weathered; almost fresh.	Sharp all round. Dorsal face has one large flake-scar and a series of concentric rows of stepped flake-scars running parallel to the left and lower edges. Ventral face has on the lower half a large flake-scar and a few (3 or 4) larger stepped flake-scars above. The cutting edge is broad and has ventrally the large flake-scar and dorsally the lower-most of the series of concentric stepped flaked-scars. A very fine specimen.
*N-48	Elongated coroid.	10.5×6.2×3.5 . . .	Rollled.	
N-68	Do.	8.8×6.6×4.2 . . .	Fresh.	
*N-12	Do.	11.5×7.6×4.0 . . .	Do.	An unfinished hand-axe (?)
N-69	Do.	8.0×6.5×3.9 . . .	Brownish patina.	
N-49	Discoidal coroid.	6.7×6.6×3.7 . . .	Fresh . . .	Grey quartzite.
*N-39	Do.	6.1×5.7×2.7 . . .	Worn.	
*N-15	Do.	11.4×10.0×5.6 . . .	Not worn.	
N-63	Worked pebble.	14.1×8.7×5.1 Semi-circular.	Fresh . . .	Half a pebble, one end of which is pointed by two flakes.
N-90	Do.	9.8×8.8×3.8 . . .	Almost fresh . . .	A pebble-core, one side of which is chipped to form an artifact like a chopper.
*N-13	Worked flake.	11.0×8.2×3.5 Oval . . .	....	Extremely worn.
*N-41	Do.	11.1×5.7×3.2 Lanceolate.	....	Do.
*N-10	Worked pebble.	10.2×7.6×3.6 . . .	....	Flat pebble with sides bevelled by sloping flakes, all round. A planing tool (?).
N-19	Worked flake.	11.5×9.1×4.5 . . .	Fresh . . .	The thicker side of the flake worked as in N-10 above.
*N-35	Do.	9.6×7.7×4.1.		
N-57	Do.	8.4×5.0×2.6.		
*N-49	Hand-axe*	11.4×8.3×4.3 Thick . . .	....	Quartz. From a thick flake. Rough work. Large flake-scars.
N-22	Acheulean hand-axe.	12.0×9.6×4.3 Oval; thick.	Tip broken . . .	Quartz. Fine tool. Small stepped flake-scars and retouch.
N-24	Do. (?)	10.1×5.8×2.2 Pointed oval; thin.	....	Quartz. From a flake. Triangular in section. Large flake-scars. No retouching.
*N-33	Do.	8.6×6.0×2.2 Triangular	....	Quartz. Made of a flake. Original pebble surface seen on the butt end.
*N-1	Pick . . .	13.8×5.0×3.8 Transverse section rhomboidal.	....	Quartz. Fine tool. Fine flake-scars can be seen. The point is thin and flat.
N-25	A worked flake.	10.8×5.8×3.3 Blade-like; triangular in section.	....	Quartz.

\* All the quartz tools are taken together.



Field No.	Type.	Size and shape.	Condition.	Description.
SITE O.				
*O-17	Pebble tool. Pre-Stellenbosch type.	12.5×8.3×4.7 Oval; pointed.	Not rolled . . .	Quartz. Pebble with one end chipped to a fine point. Ventral surface is mostly the original pebble cortex, with flake-scars towards the lower end. Dorsal face chipped nearly all over.
O-2	Do.	14.8×9.6×6.3 Elliptical.	Not rolled, but weathered and tinted orange by laterite.	Light reddish brown quartzite. Transverse flaking on the sides. Cutting end flat, thin and of moderate breadth.
*O-20	Do.	12.8×8.8×5.8 . . .	Not rolled; tip broken.	
O-21	Do.	10.1×9.4×5.7 Round	Not rolled . . .	Quartz. Made from a split pebble. Ventral side roughly flaked to make it somewhat flat. Dorsally the original pebble surface except near the margin where there are small flake-scars. Zig-zag cutting edge.
O-1	Abbevillian hand-axe.	14.4×8.2×5.4 Elongated oval.	Not rolled; not weathered; yellowish brown.	Made from a long pebble. Very bold and skilful flaking, large and at the same thin flakes having been removed. The pebble cortex remains over the butt and part of the left half of the dorsal face. Transverse flaking.
O-2	Do.	10.9×10.8×4.5 . . .	Not rolled; not weathered; yellowish brown; tip broken.	Made from a flake from the side of a large pebble, the cortex of which is present on the butt and on the dorsal side. Flaking as in the above.
*O-16	Do.	9.4×7.3×3.7 . . .	Do.	Pebble cortex only at the upper end. Thin, large flakes removed.
O-18	Do.	9.9×6.0×3.0 . . .	Not rolled; reddish brown patina; weathered; tip broken.	Made from a pebble. The whole of the dorsal side unflaked. Ventral side has two large stepped flake-scars. Crude tool.
O-22	Early Acheulean hand-axe.	9.5×7.1×3.7 Oval . . .	Fresh . . .	Made from a split pebble. Ventral face flat and little worked. Dorsally, the upper half has the original pebble cortex; lower half has crude flake-scars.
O-14	Miniature hand-axe. Acheulean.	9.3×6.0×2.9 Oval . . .	Fresh . . .	Worked all over dorsally.
O-31	Advanced Acheulean hand-axe.	9.2×4.9×3.7 Lanceolate.	Slightly rolled; yellowish brown.	Pebble-butted. Tapering to a curved point.
*O-30	Do.	7.6×4.4×3.3 Lanceolate.	Do.	Similar to, but smaller than, the above. Point straight.
O-8	Small hand-axe . . .	7.1×5.5×2.3 . . .	Fresh . . .	Finely flaked on the dorsal face; ventrally the original pebble cortex. Minute stepped flake-scars on the right dorsal margin. This side, being hollow, might have been used as a scraping edge. Plate VII(l).
*O-19	Do.	9.1×5.8×3.5 Irregular	Weathered . . .	Made from a flat core. Ventral face flat. Irregular stepped flaking dorsally. Point rugged dorsally.
*O-3	Do.	7.9×6.2×2.5 Roughly oval.	Fresh . . .	Made from a flat core. Series of stepped flake-scars along both the sides.
*O-29	Scraper on a flake.	7.4×5.9×2.0 Nearly oblong.	Very slightly weathered.	A thin flake with the pebble cortex ventrally, and with fine symmetrical flake-scars dorsally.
O-6	Hollow scraper . . .	5.3×4.5×1.2 . . .	Fresh . . .	Quartz flake.
O-10	Graver . . .	5.7×3.2×0.8 . . .	Slightly weathered . . .	A thin flake. Rounded point blunt.



Field No.	Type.	Size and shape.	Condition.	Description.
*O-26	Small pebble with the lower margin flaked.	7.7 × 4.6 × 2.4 . . .	Not rolled; not weathered.	Thin flakes removed. The right side ends in a point. Might have been a boring tool.
O-28	Core . . . .	9.4 × 8.7 × 4.3 . . . Nearly square.	Weathered.	
O-11	Do. . . .	5.5 × 5.5 × 3.6 . . .	....	Quartz. Round.
*O-23	Core, elongated . . .	11.1 × 7.8 × 4.8.		
O-25	Do. . . .	7.9 × 5.9 × 3.3.		
*O-7	Flake . . . .	12.8 × 11.8 × 3.0.		
*O-12	Do. . . .	5.5 × 2.7 × 1.3.		
*O-15	Do. . . .	9.7 × 5.6 × 2.1.		
*O-27	Do. . . .	8.0 × 6.2 × 2.6.		

SITE O.<sup>2</sup>

O <sup>2</sup> -16	Abbevillian hand-axe.	12.7 × 9.2 × 5.4 . . .	Not rolled; weathered; yellow brown patina; tip broken.	Made from a pebble. Pebble cortex on the butt and part of the sides. Ventral face is one large flake-scar. Stepped flake-scars dorsally.
*O <sup>2</sup> -1	Do.	12.5 × 9.1 × 4.2 . . . Pear-shaped.	Cf. above . . .	Made from a flat pebble. Pebble cortex on the butt and the upper half of the ventral face. Crude stepped flake-scars on the flaked sides.
O <sup>2</sup> -35	Do.	11.6 × 8.4 × 5.0 . . . Irregular	Do. . . .	Almost like the above, but better finished.
*O <sup>2</sup> -2	Do.	10.5 × 7.5 × 3.4 . . . Ovate; thin.	Do. . . .	Cf. above. Less of stepped flaking.
O <sup>2</sup> -33	Do.	8.3 × 7.4 × 3.7 . . . Squat ovate.	Do. . . .	Made from a split pebble. Working end a thin, short point.
*O <sup>2</sup> -28	Do.	8.5 × 7.0 × 4.3 . . . Irregular	No patina . . .	Cf. above, but somewhat coarser flaking.
*O <sup>2</sup> -38	Acheulean hand-axe.	12.4 × 9.2 × 3.3 . . . Oval; thin.	Fresh . . .	Quartz. Made from a thin flat flake. Fine flaking, some stepped.
O <sup>2</sup> -29	Late Acheulean hand-axe.	7.5 × 6.4 × 3.3 . . . Oval	Not rolled . . .	Very finely flaked tool. The cutting edge is broad, the butt narrow. The general appearance recalls an unpolished celt.
*O <sup>2</sup> -7	Flake . . . .	7.5 × 5.2 × 2.3.		
*O <sup>2</sup> -10	Do. . . .	9.9 × 5.5 × 2.6.		
O <sup>2</sup> -13	Do. . . .	6.9 × 5.8 × 1.6.		
O <sup>2</sup> -20	Do. . . .	7.6 × 5.0 × 2.0.		
O <sup>2</sup> -24	Do. . . .	8.0 × 5.6 × 2.2.		
*O <sup>2</sup> -26	Do. . . .	9.2 × 5.3 × 2.3.		
*O <sup>2</sup> -27	Thick flake . . .	6.1 × 4.3 × 2.8.		
*O <sup>2</sup> -36	Thin flake . . .	8.1 × 6.4 × 2.2.		
O <sup>2</sup> -39	Small hand-axe (?)	7.6 × 5.7 × 2.3.		
*O <sup>2</sup> -40	Thin chopper, unfinished (?)	13.0 × 6.8 × 3.2.		
O <sup>2</sup> -41	Do.	13.9 × 9.0 × 3.2.		
O <sup>2</sup> -42	A big core . . .	11.7 × 8.5 × 5.5.		
*O <sup>2</sup> -9	Core . . . .	8.3 × 5.7 × 3.1.		
O <sup>2</sup> -8	Pebble . . . .	5.3 × 3.8 × 2.8.		



Field No.	Type.	Size and shape.	Condition.	Description.
SITE P (OSAGLE), GUSTUR DISTRICT.				
P-1	Acheulean hand-axe.	10.0 × 7.0 × 3.8 Almond-shaped.	Not rolled; almost fresh.	Pebble cortex on a small area on the butt. Stepped flaking on the left margin. Ventrally, sloping parallel flake-scars on the right margin and stepped ones on the left. A fine tool.
*P-2	Do.	9.8 × 6.5 × 2.6 Pointed oval.	Do.	Made from a flake from a pebble. Dorsal face has minute step flaking as in N 23. Ventral face nearly flat, but has a number of stepped flake-scars along the left margin. Fine, flat point.
P-6	Small chopper on a core.	7.4 × 4.9 × 3.4	Fresh.	
*P-5	Small pebble chipped on one end to a point.	7.0 × 5.0 × 2.5 Oval	....	Quartz. The entire ventral face has the original pebble cortex.
P-4	Worked flake	7.1 × 4.5 × 1.9 Semi-circular.	Almost fresh	Straight "back".
SITE Q.				
*Q-3	Pebble-butted hand-axe. Abbevillian-Acheulean.	9.3 × 5.6 × 4.4	Not rolled; deep brown.	Most of the pebble cortex remains. Two large and two small flake-scars on the pointed end.
Q-1	Acheulean hand-axe.	11.0 × 6.0 × 3.1 Lanceolate.	Not rolled; dark brown.	Made from a heavy core with iron-rust coloured crust. Finely flaked to a narrow spear-head point.
Q-4	Pick	10.3 × 5.6 × 3.7 Lumpy.	Do.	Made from a thick core. The ventral side constituted by the pebble cortex. Plate V (k).
*Q-2	Awl-like tool	7.9 × 5.3 × 3.1	Do.	Made from a split pebble. One large flake removed from the dorsal face. Fine point.
Q-6	Pebble, flaked on one end.	7.9 × 6.8 × 5.3	Not weathered or rolled.	A flaking tool.
*Q-7	Thin flake	....	....	
Q-8	Do.	....	....	
*Q-5	Do.	....	....	
SITE R.				
*R-3	Cleaver. Late Acheulean.	12.9 × 7.2 × 4.1 Oblong.	Not rolled; deep dark brown and heavy.	Made of a flake from the side of pebble. Ventral face, unworked main flake-scar. Dorsally one very long median flake-scar flanked by smaller transverse ones; one stepped flake-scar on the margin of the arched cutting edge.
*R-10	Coroid, discoidal	7.9 × 7.0 × 4.4	Not rolled; brown.	
R-21	Do.	5.1 × 4.5 × 3.0	Worn.	
*R-23	Coroid, elongated	5.9 × 5.0 × 2.7	Do.	
R-14	Worked core	6.2 × 4.7 × 2.6	Worn; broken.	
R-1	Large triangular core.	11.5 × 11.0 × 4.3	Not rolled; weathered. Tinted by laterite.	Flat. Sides bevelled by bold flaking.
*R-7	Small hand-axe. Acheulean.	7.5 × 5.6 × 4.0 Roughly oval.	Not rolled; weathered	Made from a pebble.



Field No.	Type.	Size and shape.	Condition.	Description.
*R-11	Small hand-axe. Acheulean.	7.5 × 4.5 × 3.1 Oblong.	Not rolled; not weathered; dark brown.	Made from a pebble. Dorsal face—minute flake-scars. Ventral face: left half is the original pebble cortex; right half is boldly flaked and somewhat hollowed from above. The cutting edge is therefore on the right side. Scraper (?)
R-9	Worked core. Acheulean.	8.3 × 5.8 × 3.6 . .	Fresh looking .	Symmetrical transverse flake-scars on both faces on either side of a median ridge.
R-8	Do.	9.4 × 7.0 × 4.8 . .	....	An unfinished hand-axe(?) with the tip broken. Bold flaking.
R-27	Chopper . .	7.4 × 5.3 × 2.7 Pointed oval.	....	Quartz. A flat-butted core, with the lower dorsal margin chipped transversely. A large flake-scar on the opposite face intersects the former.

SITE R.<sup>1</sup>

R <sup>1</sup> -53	Pebble tool. Pre-Stellenbosch type.	14.6 × 8.7 × 5.2 Roughly conical.	Thin white crust; unrolled.	Yellowish brown quartzite. Pebble is almost pentagonal in transverse section. Four large flake-scars. Pointed working end, which is triangular in section. Plate II(c).
*R <sup>1</sup> -49	Do.	15.2 × 12.6 × 6.2 Broad, oval.	Thin white crust; slightly rolled.	Made from a flat pebble. Flaked along the two dorsal and two ventral margins. The point is triangular.
*R <sup>1</sup> -11	Do.	13.3 × 11.0 × 6.0 Pear-shaped.	Whitish crust falling off in patches.	Flat pebble. The ventral surface is flaked nearly completely. Some large stepped flake-scars near the pointed lower end. Dorso-lateral margins are formed each by a large flake-scar. Point triangular.
R <sup>1</sup> -13	Do. (?)	8.5 × 7.6 × 4.9 . .	Very thin whitish crust.	From the nature of the crust, this appears to be somewhat later than the above three artifacts. Lower end flaked on both faces. Stepped flaking ventrally.
R <sup>1</sup> -46	Abbevillian hand-axe.	20.5 × 9.6 × 6.3 Elongated; pick-like.	Rolled; smooth, with a very dark grey glossy patina.	Made from a long core. Very bold flaking, transversely from the margins. Zig-zag margins. Plate II (g).
*R <sup>1</sup> -30	A worked pebble .	10.7 × 9.0 × 6.9 . .	Greyish brown patina	An unfinished tool. Roughly flaked.
*R <sup>1</sup> -56	Pebble chopper. Abbevillian.	12.7 × 10.0 × 6.1 Semi-circular.	Not rolled; weathered; brown patina and patches of black iron stain.	Made from a pebble the crust of which is lateritised. A few moderate sized flake-scars along the lower margin on either face.
R <sup>1</sup> -16	Abbevillian hand-axe.	12.6 × 9.5 × 5.3 . .	Almost fresh-looking; not rolled.	Made from a pebble. But for its freshness it can be grouped with the older type of tools. The original pebble cortex remains on the upper margin.
*R <sup>1</sup> -39	Abbevillian Cleaver.	18.2 × 12.8 × 7.7 Roughly hexagonal.	....	A large flat pebble with rough flaking on the dorsal face and little on the ventral. A few flake-scars are later than the rest, which have all a greyish crust. Cutting edge, straight, and formed by the intersection of the ventral pebble surface with the flake-scars opposite.
R <sup>1</sup> -54	Hand-axe. Early Abbevillian.	14.9 × 11.3 × 6.5 .	Not rolled; fresh looking.	Flat pebble. Worked only on the left half and lower margin of the dorsal face. Moderate sized flake-scars. Broad point.



Field No.	Type.	Size and shape	Condition.	Description.
*R <sup>1</sup> -50	Hand-axe. Early Abbevillian.	14.6 × 10.9 × 5.5 Oval	Not rolled; fresh looking.	Made from a flat pebble. Flaked nearly all over, except on the dorsal right margin. Broad transverse flaking. (A later tool, when freshness and absence of patination are taken into consideration).
*R <sup>1</sup> -7	Do.	12.4 × 8.5 × 6.9 Roughly conical; and square in section near the middle.	Weathered and having greyish brown patina.	Square-sided pebble. Roughly flaked on nearly the whole of the ventral face. Dorsal right half crudely flaked, almost hollowed. Somewhat fine flaking near the flat pointed end.
*R <sup>1</sup> -12	Hand-axe. Late Abbevillian.	12.9 × 8.5 × 6.0 Oval	Not rolled; tip broken.	Almost black quartzite. Made from a split pebble. Boldly flaked, chiefly on the dorsal face.
R <sup>1</sup> -9	Abbevillian-Acheulean hand-axe.	10.1 × 7.6 × 4.2 Oval	Slightly weathered.	Made from a split pebble. Pebble cortex still seen on the butt area.
R <sup>1</sup> -27	Do.	12.1 × 7.6 × 5.0 Elongated oval.	Rolled; heavy; dark brown colour.	Made from a core. Dorsal face has a series of convergent flake-scars which have a lump of quartzite at the area where they nearly converge. Ventral face has a few flake-scars along the margin. Butt nearly flat on account of an oblique flake-scar.
*R <sup>1</sup> -40	Hand-axe. Early Acheulean.	10.8 × 7.7 × 3.0 Pointed oval.	Weathered; reddish brown colour.	Made from a flake. The main flake-scar is not worked. Dorsal face has a large central flake-scar, flanked by smaller ones all round.
R <sup>1</sup> -25	Do.	11.3 × 6.9 × 5.0 Diamond shaped in transverse section.	Very little weathered	Purplish quartzite. Made from a quarter segment of a four-sided pebble. Ventrally the butt has the pebble cortex; dorsally, fine flaking. The tip snout-like, and margins too blunt.
R <sup>1</sup> -44	Acheulean hand-axe.	12.0 × 9.5 × 6.5 Pear-shaped.	Not rolled; fresh looking; tip broken.	Pebble-butted. Bold flaking. The working end is drawn to a long point.
R <sup>1</sup> -36	Hand-axe. Later Acheulean.	13.2 × 8.7 × 5.6 Oval	Not rolled, but much weathered.	The material is coarse. Pebble-butted. Fine flaking. Thin flat point.
R <sup>1</sup> -37	Do.	10.8 × 8.2 × 4.6 Broad oval.	Rolled slightly; weathered; pitted and mottled yellow patches on a dark brown background.	Almost like a disc. Thickest at the centre, towards which flake-scars on the dorsal face converge. Flake-scars on the ventral face not very clear. Sharp along all the edges. The short point is asymmetrically placed and directed somewhat sideways.
R <sup>1</sup> -51	Do.	11.7 × 8.7 × 3.7	Not rolled, but weathered; point broken.	Finely flaked tool. Flat ventrally. Convergent flake-scars dorsally.
*R <sup>1</sup> -33	Hand-axe. Advanced Acheulean.	12.5 × 7.1 × 4.7 Pointed oval.	Not rolled, but slightly weathered. The bluish grey quartzite has taken on yellowish brown tint.	Made from a thick core, flaked all over. A symmetrically placed point as in the above. Fine symmetrical transverse flake-scars.
*R <sup>1</sup> -21	Do.	11.3 × 6.9 × 4.0 Oblong; thin.	Not rolled or weathered.	Made from the side of a pebble. Mostly transverse flaking, with some stepped.
R <sup>1</sup> -43	Do.	14.4 × 8.7 × 5.2 Dagger-like.	Do.	Purplish quartzite. Made from a split pebble. Thick pebble butt, which shows that the pebble-butted tools were, perhaps, none of them hafted. The artifact was thinned by longitudinal flaking. Fine stepped retouching along the margins. Thin flat point.



Field No.	Type.	Size and shape.	Condition.	Description.
*R <sup>1</sup> -20	Hollow scraper	8.5 × 7.5 × 3.7	Weathered and slightly rolled.	A split pebble, flat ventrally. Dorsally the lower margin hollowed out by a large flake-scar.
*R <sup>1</sup> -12	Flake	12.1 × 6.8 × 3.3	Rolled	Has the thin white crust referred to above in connexion with pre-Stellenbosch tools.
*R <sup>1</sup> -6	Core	9.2 × 7.5 × 5.1	Rolled and worn.	
R <sup>1</sup> -2	Do.	10.9 × 8.3 × 4.7	Rolled smooth	Ventrally original pebble surface.
*R <sup>1</sup> -28	Do.	9.5 × 9.0 × 6.0 Disc-like.	Weathered, not rolled. Cf. R <sup>1</sup> -30.	
R <sup>1</sup> -35	Do.	7.4 × 6.0 × 5.2	Not rolled.	
R <sup>1</sup> -29	Do.	6.9 × 5.6 × 4.8	Weathered and slightly rolled. Has the whitish crust.	
*R <sup>1</sup> -17	Do.	8.1 × 6.2 × 3.5	Not weathered.	
R <sup>1</sup> -18	Flake	14.0 × 9.6 × 4.2 Roughly quadrangular.	Worn smooth	Ventrally, main flake-scar with bulb of percussion. Dorsally, four flake-scars the margins of which make the figure of a cross.
*R <sup>1</sup> -24	Worked flake	6.7 × 4.9 × 1.7	....	
R <sup>1</sup> -32	Do.	7.3 × 4.4 × 1.6	Weathered slightly	
*R <sup>1</sup> -45	Miniature hand-axe.	7.1 × 4.6 × 2.9 Oval	....	Quartz.
R <sup>1</sup> -23	Flake point (?)	7.0 × 4.8 × 1.9 Triangular.	....	Ditto.
R <sup>1</sup> -41	Flake	....	....	Sides of a pebble. Has striking platform of angle about 120°.
*R <sup>1</sup> -31	Do.	....	Whitish crust	Similar to the above, but worn; striking platform at an angle of about 95°.

## SITE T.

*T-6	Hand-axe. Earliest Abbevillian.	12.4 × 8.0 × 7.0 Pyramidal.	Weathered; lateritised.	Made from a pebble. Thick pebble butt. Three large flake-scars on three sides. Transverse section triangular.
T-5	Do.	9.3 × 7.3 × 4.5	Do.	Split pebble. A few flake-scars on the lower dorsal margin.
T-7	Pebble flaking tool	8.0 × 7.9 × 5.3	Do.	Pebble flaked all round to a point. Tip completely battered. Butt has pebble cortex.
*T-8	Pebble tool	9.2 × 8.4 × 4.5	Not weathered	Split pebble, flaked dorsally. Pointed business end.
*T-1	Worked pebble	6.9 × 5.4 × 3.1	Do.	
*T-14	Do.	6.8 × 4.1 × 3.4	Worn and weathered.	
T-17	Flake	7.6 × 5.0 × 2.6 Blade-like; thick.	Do.	Transverse section a parallelogram.
T-9	Do.	10.3 × 7.8 × 2.9 Irregular.	Laterite stained.	



## MANLEY COLLECTION OF STONE AGE TOOLS.

Field No.	Type.	Size and shape.	Condition.	Description.
SITE T <sup>1</sup> .				
*T <sup>1</sup> -1	Core . . .	5.9×5.5×2.8 . . .	Worn.	
T <sup>1</sup> -2	Do. . . .	7.1×5.9×3.4 . . .	Not weathered ventrally, where it was not exposed, but weathered and lateritised dorsally.	
SITE T <sup>2</sup> .				
*T <sup>2</sup> -2	Core . . .	6.0×5.1×3.0 . . .	Not rolled but weathered.	
*T <sup>2</sup> -3	Do. . . .	4.6×4.5×2.0 . . .	Do.	
*T <sup>2</sup> -5	Diminutive hand-axe. Acheulean.	6.3×4.5×3.7 . . .	Do. . . .	Pebble-butted. Nearly semi-circular in transverse section through the middle. Fine flaking.
T <sup>2</sup> -6	Flake . . .	6.7×4.9×2.6 . . .	Worn and weathered.	
T <sup>2</sup> -7	Do. . . .	5.0×3.8×2.1 Thick	Weathered.	
SITE U.				
U-89	Pebble tool. Pre-Stellenbosch type.	10.9×8.5×6.6 Nearly round.	Not at all worn; whitish crust appearing in a few patches.	Three large flake-scars on each of the faces. The edges quite sharp.
U-78	Abbevillian hand-axe.	7.8×6.5×6.0 Roughly conical.	Not worn; no crust formed on the flake-scars.	Pebble-butted. Fine point.
*U-3	Hand-axe. Early Acheulean.	11.5×8.7×4.7 Pear-shaped.	Not worn; tip broken	Made from the side of a pebble. Ventral side has long convergent flake-scars. Dorsal ones larger and bolder. Upper half is made of the original pebble cortex.
*U-61	Do. . . .	11.2×7.8×4.2 Oval	Not worn . . .	Flaked all over. Because of the toughness of the material, a large number of stepped flakes on the flat ventral face. Large transverse flake-scars on the right half of the dorsal face.
*U-2	Hand-axe, almost cleaver-like. Later Acheulean.	9.4×6.0×3.5 Oval	Not worn weathered.	Made from a thin core. Large, thin flake-scars.
U-1	Cleaver . . .	10.5×7.1×4.4 Oval	Do . . .	Made from the side of a pebble. Dorsally, the butt region has the original pebble cortex. Below it are two large flake-scars, one from the left and the other from the right. Corresponding to the last there is on the ventral side a flake-scar starting from the right ventral margin. These two intersecting produce the cutting edge. The rest of the ventral face has fine transverse flake-scars along the margin. Plate III (l).
*U-71	Worked core . . .	....	....	Ventrally pebble surface.
*U-7	Do. . . .	....	....	Ditto.
*U-10	Do. . . .	....	....	Ditto.
U-47	Do. . . .	....	....	
U-15	Do. . . .	....	....	
U-9	Do. . . .	....	Fresh . . .	Broken half of a fine hand-axe.




Field No.	Type.	Size and shape.	Condition.	Description.
U-72	Diminutive hand-axe or lance-head (?).	7.8 × 5.7 × 2.5 Elliptical	Weathered . . .	Flaked symmetrically all along the edges dorsally. Ventral face little worked except near the point.
*U-5	Diminutive hand-axe.	8.5 × 5.5 × 2.3 Oval; pointed.	Not worn . . .	Finely flaked. Long sharp point.
U-62	Do. . .	6.5 × 5.0 × 2.0 Oval . .	Do. . . .	Flat ventrally. The scheme of flaking on the dorsal face as in Victoria West tools.
*U-4	Do. . .	7.4 × 5.6 × 3.0 Oval . .	....	One side made somewhat concave by a large flake-scar. Hence may have served as a scraping tool.
*U-7	Convex scraper . .	....	....	Split pebble. Part of the margin retouched to produce a scraper edge.
U-77	End-scraper . .	5.0 × 2.6 × 1.8 " Duck-bill."	Not worn; slightly weathered.	From a flake.
U-79	Blade . . .	6.7 × 4.0 × 1.3 Mango-shaped.	Very slightly weathered.	Thin with a low angled striking platform. S-shaped cutting edge.
*U-80	Do. . . .	5.5 × 3.5 × 1.3 . . .	....	
*U-81	Do. . . .	9.0 × 5.8 × 1.5 . . .	....	
U-84	Blade and spoke-shave.	7.9 × 4.4 × 2.1 . . .	Fresh . . . .	" Backed " blade. The lower margin on the right has a hollow flake-scar, with a sharp concave scraping edge.
*U-20	Knife-edge . .	6.3 × 5.5 × 2.3 . . .	....	Hard, tough quartzite core, with a retouched straight cutting edge on one side.
*U-16	Semi-circular flake	8.5 × 6.2 × 2.3 . . .	....	" Backed ".
U-11	Worked flake . .	6.4 × 6.3 × 1.9 . . .	....	
U-8	Do. . . .	....	....	Bulb of percussion. The striking platform is the original pebble surface; angle about 100°.

## SITE V.

V-20	Hand-axe Acheulean. (?)	9.7 × 6.5 × 3.6 Oblong . .	Worn and weathered; edge battered and damaged.	
*V-1	Unfinished hand-axe.	11.6 × 7.9 × 4.8 . . .	....	Series of stepped flake-scars.
*V-5	Cleaver on flake . .	11.2 × 10.5 × 3.3 . . .	....	Ventrally, bulb of percussion present, and also striking platform. Angle about 110°.
V-2	Hand-axe . . .	10.2 × 5.9 × 3.7 Oval . .	Brown patina on bluish quartzite; slightly weathered.	Crude, pebble-butted.
*V-22	Do. . . .	8.0 × 6.1 × 3.6 Oblong . .	Rolled . . . .	Finely flaked. Adze edge.
V-24	Elongated coroid . .	8.3 × 6.4 × 3.8 . . .	Worn smooth; brown patina.	
*V-4	Do. . . .	9.7 × 6.3 × 4.0 . . .	Not worn . . . .	
V-35	Coroid, discoid . .	5.9 × 6.2 × 3.8 . . .	Worn. Cf. V-24 . .	
V-25	Do. . . .	8.0 × 6.4 × 3.5 . . .	Worn; No patina . .	Roughened. / Reddish brown weathered cortex.
*V-23	Coroid, discoid . .	6.7 × 5.4 × 3.5 . . .	Worn . . . .	
*V-29	Do. . . .	4.8 × 4.2 × 2.0 . . .	Do. . . .	



Field No.	Type.	Size and shape.	Condition.	Description.
V-27	Hollow scraper	8.7 × 6.7 × 2.7 Semi-lunar.	Worn	A flat semi-circular pebble. Stepped flake-scars on the right side; left side made thin by transverse flaking. Left half of the upper margin concave. Plate IV (h).
V-7	Hollow scraper from a core.	7.6 × 6.8 × 3.3	Rolled and worn slightly.	The lower margin thinned and hollowed.
V-31	Do. 	7.2 × 5.0 × 2.2	Do.	Flake.
*V-21	Hand-axe type from a flake.	8.2 × 5.2 × 2.1 Oblong	Weathered	Ventral surface flat with a bulb of percussion. Striking platform at an angle of about 115°. Dorsally sloping flake-scars along the sides and lower end (which is very worn). Used perhaps as scraper.
V-10	Diminutive hand-axe.	6.0 × 5.2 × 2.7	Slightly weathered	Made from the side of a pebble. Only dorsally flaked. Fine flaking. Broad point.
*V-3	Flat flake	9.3 × 5.6 × 2.7	Worn	Flaked along the sides.
*V-33	Thick flake	7.2 × 6.4 × 3.1	Unrolled, but weathered.	Stepped flake-scars on a pointed end.
V-18	Curved flake-chopper (?).	8.2 × 4.9 × 2.6	Rolled and worn	"Backed". Flaked along the lower margin.
V-6	Do.	10.0 × 8.4 × 2.8	Fresh	Quartz. Worked along the lower edge.

## SITE W.

*W-21	Acheulean hand-axe.	9.4 × 7.2 × 3.6 Oval	Not rolled; but weathered; iron stained.	Made from a pebble. Ventral face nearly flat. Large thin flaking dorsally. Flaked all over.
W-13	Hand-axe.	8.3 × 7.6 × 4.0 Squat oval.	Do.	Split pebble. The pebble was split by a blow in the middle of its upper side. Ventral face absolutely level except for a small flake on the pointed end. Dorsally, upper half above the equatorial line unflaked; flaked below, so that this half is roof-like. Dwarfish point.
*W-14	Worked core, discoid.	8.8 × 6.8 × 4.5	Not worn.	
*W-20	Do.	5.7 × 6.7 × 5.4	Not worn, but weathered.	
W-35	Do.	4.9 × 4.5 × 3.1	....	Quartz.
*W-7	Elongated core	7.6 × 6.5 × 3.2	Weathered.	
*W-40	Do.	6.3 × 4.4 × 2.6	Not weathered.	
W-37	Do.	10.0 × 6.4 × 3.4 Oblong.	Worn and weathered.	
W-1	Lance-head (?) on a flake. Cf. stemmed point.	7.8 × 5.7 × 2.0	Not worn; weathered	Made from a thin flake. Dorsally unworked except at the upper end where it is narrowed, by curved oblique flaking to produce a "neck". On the ventral surface, the bulb of percussion can be seen. Plate V (m).
*W-32	Worked bit of clear quartz.	4.2 × 2.8 × 1.1	....	
*W-13	Worked flake	8.6 × 5.3 × 2.5	Slate coloured	"Bulb" present.
W-2	Do.	7.9 × 7.2 × 1.6 Thin	....	Ditto.
W-48	Curved flake	5.7 × 4.1 × 2.6	....	



Field No.	Type.	Size and shape.	Condition.	Description.
SITE X.				
*X-1	Small hand-axe. La Micoque type.	7.8×4.9×2.5 Roughly pear-shaped.	Not worn or weathered.	Thick at the butt. Thin long drawn out lower pointed end. Ventrally, a longitudinal flake-scar extending the whole length of the tool, flanked by smaller flake-scars. Irregular transverse flaking on the dorsal face.
SITE Y.				
*Y-1	Small flake	3.6×2.6×1.0	....	
SITE Z.				
Z-18	Pebble tool. Pre- Stellenbosch type.	11.8×9.9×6.6	Not rolled; weathered; laterite stained.	Very crude.
Z-6	Abbevillian hand- axe.	10.1×9.5×5.3 Squat oblong.	Not rolled and weathered; dark brown.	Pebble cortex, only a patch, at the butt end. Roughly flaked. Ragged edges.
*Z-7	Do.	11.7×7.8×3.6 Ellipti- cal; thin.	Do.	Very crude. Flaked all over.
Z-8	Do.	9.5×7.2×6.0 Thick	Weathered; laterite tinted; tip missing.	Roughly flaked all over.
*Z-5	Acheulean hand- axe.	10.4×7.5×3.5 Oval; thin.	Weathered; tip broken.	Pebble cortex on the straight flat butt. Thin flaking. Inferior workmanship.
*Z-3	Hand-axe	9.6×7.0×4.8 Oval; thick.	....	Quartz. Worked on both sides.
Z-9	Worked core	12.5×10.4×5.0	Slightly weathered.	
*Z-12	Do.	8.0×5.9×5.8	....	
Z-13	Do.	8.5×6.9×2.8	....	
*Z-14	Do.	6.4×5.0×2.2	....	
Z-17	Do.	9.2×5.3×3.6	....	
Z-16	Flake	7.6×5.5×3.3	Rolled.	
*Z-10	Do.	9.6×7.5×2.6	....	
SITE 2.				
*2-3	Hand-axe. Crude Acheulean.	11.4×9.0×3.9 Pear- shaped.	Fresh	Made from a pebble. Flaked only on the dorsal face. Though the flaking is small and thin, yet the tool as a whole is crude. This is true of all the tools from this site. It re- presents a degenerate culture.
2-67	Do.	8.8×5.8×3.9 Dagger- like.	Not worn	Made from a pebble. Crudely chipped. Numerous irregular stepped flake- scars.
*2-10	Do.	8.9×5.3×3.2 Oval	Not worn, but weathered.	Pebble. Flaked on the sides. Large flake-scars.
2-59	Do.	7.0×4.8×3.2 Roughly oval.	Fresh	Split pebble, chipped at the lower end.
2-112	Do.	9.0×6.5×3.4 Pointed oval.	Not rolled	Quartz. Worked all over except a small area on the butt. Edges nearly straight.
2-4	Pebble butted chopper.	7.4×6.3×4.4 Oblong	Unrolled	Pebble flaked thin. Pebble surface at the butt. Ventral face nearly flat. Bold, though thin, flaking.
*2-113	Do.	6.3×7.5×4.6	Slightly weathered	Flaked both ventrally and dorsally along the lower margin.



Field No.	Type.	Size and shape.	Condition.	Description.
*2-98	Pebble butted chopper.	7.7 × 7.4 × 3.5 Oblong .	Unrolled, but weathered; laterite tinted.	<i>Cf.</i> above.
*2-15	Pebble butted chopper on a flake.	7.4 × 5.7 × 3.1 Oblong .	Fresh . . .	Similar to the above but more stepped flake-scars, especially near the lower, business end.
2-43	Pebble chopper .	8.9 × 6.8 × 2.9 Irregular.	Do. . .	Flat pebble, lower end and sides chipped. Crude step flaking near the broad cutting edge.
*2-58	Acheulean hand-axe.	9.5 × 7.1 × 2.7 Pear-shaped.	Fresh; fresher on the ventral side.	Made from a thin pebble. Ventrally flaked nearly all over; three longitudinal flake-scars. Dorsally the pebble cortex except at the sides where there are the transverse flake-scars. Elongated point.
2-40	Do. .	9.4 × 6.2 × 2.0 Oval; very thin.	Fresh-looking .	<i>Cf.</i> above, but flaked all over on both faces. Only at the butt does a little of the original pebble cortex remain. Ventral face has three longitudinal flake-scars. Dorsal transverse flake-scars. Fine thin point.
2-26	Do. .	10.0 × 6.9 × 2.5 Oval; very thin.	Do. .	Similar to the above. Flake-scar pattern different. All transverse flake-scars. Some stepped flaking.
*2-105	Worked core .	....	Do. .	
2-94	Do. .	....	Do. .	
2-101	Do. .	....	Do. .	
2-27	Do. .	....	Do. .	
2-76	Do. .	....	Do. .	
*2-99	Do. .	....	Weathered and rolled.	
2-37	Do. .	....	Weathered.	
*2-107	Core .	....	Weathered; not rolled; laterite tinted.	
2-33	Do. .	....	Weathered; not rolled; laterite tinted.	
*2-16	Do. .	....	Not rolled.	
*2-86	Do. .	....	Do. .	Quartz.
*2-96	Small hand-axe (?)	8.6 × 5.2 × 3.3 Roughly ovate. Irregular.	Weathered, not rolled. Laterite tinted.	Very crudely chipped.
2-89	Small hand-axe. Acheulean.	7.7 × 5.5 × 3.4 Oval .	Weathered; not rolled; laterite tinted; worn.	Well-chipped all over.
*2-63	Do. .	6.8 × 5.6 × 2.9 Oblong .	Not rolled; slightly weathered.	Ditto.
2-24	Do. .	7.4 × 5.2 × 2.5 Ovate thin.	Do. .	Well-chipped all over. Numerous stepped flake-scars.
2-25	Small hand-axe .	7.2 × 5.6 × 2.6 . .	Do. .	Made from a pebble. Pebble cortex seen on the butt and middle of the ventral face. Roughly chipped. Crude.
*2-79	Do. .	6.7 × 5.9 × 2.0 . .	Weathered and worn; laterite tinted; tip broken.	Made from a thin flake. Crude tool.



Field No.	Type.	Size and shape.	Condition.	Description.
*2-95	Small hand-axe	6.7 x 3.1 x 2.4 Ovale, thin.	Not weathered	Made from the side of a pebble. Ventral side has the pebble cortex at the centre. Fine stepped flake-scars.
2-1	Do.	6.0 x 4.9 x 1.9 Oval	Not rolled	From a flake. Ventrally there is the original pebble cortex. Dorsal face flaked all over.
2-72	Do.	6.3 x 4.2 x 1.8 Elongated oval.	....	Flaked all over.
2-41	Do.	4.7 x 3.4 x 1.7 Elongated oval.	Tip broken	Ventrally, the original pebble cortex.
*2-61	Do.	4.9 x 3.6 x 1.6 Oval	....	Very symmetrical little tool. Flaked all over. Minute flake-scars.
*2-97	Hollow scraper on core.	6.7 x 5.2 x 3.2	Weathered; laterite tinted.	Made like a small hand-axe, but one side is hollowed.
2-93	Side-scraper on flake.	5.5 x 4.2 x 1.5 Semi-circular.	....	Quartz. Flat flake. Straight edge bevelled on both faces by a flake-scar.
2-36	Blade	5.1 x 3.9 x 1.6 Thick	Fresh	Thick flake. Bulb of percussion. Striking platform at right angles to the main flake-scar.
*2-8	Do.	5.5 x 3.9 x 1.2	Do.	Thin flake.
2-32	Borer	5.4 x 4.8 x 1.3 Thin	Laterite tinted	A thin flake, finely chipped into curved beak-like point. The point is somewhat flat.
*2-20	Do.	5.4 x 4.2 x 1.4 Thin	....	Quartz. Thin flake. Pointed.
*2-68	"Point" on a flake	6.8 x 5.4 x 1.6 Triangular thin.	Not weathered; tip broken.	Nearly flat ventrally. Thin flake-scars dorsally. Stepped flake-scars near the point.
2-14	Planing tool	6.9 x 5.8 x 2.6 Squat, truncated cone.	Fresh	Quartz. Made from a thick flake flat ventrally. Pebble cortex at the butt. The rest of the sloping sides flaked to form the steep plane edge.
*2-28	Worked flake	....	Laterite tinted.	
*2-49	Do.	....	Do.	
*2-66	Do.	....	Not rolled	Split pebble.
*2-75	Do.	....	Do.	Pebble-butted. Flat. Worked on both faces.
*2-77	Do.	....	Worn	Finely flaked. Has a thin point.
2-100	Do.	Disc-like	Fresh.	
2-109	Do.	....	Weathered; laterite tinted; rough.	
2-104	Do.	....	Do.	
SITE 3.				
*3-20	Worked flake	Semi-circular	Fragment	Quartz. Has the appearance of a disc cut into two. Nice edge.
3-2	Do.	....	....	Quartz.
3-17	Do.	....	....	Do.
*3-6	Core	Irregular.		
3-19	Worked flake.			
*3-1	Tip of a hand-axe (?).	....	....	Fine flaking.



Field No.	Type.	Size and shape.	Condition.	Description.
SITE 4.				
*4-21	Small hand-axe, Acheulean.	6.5 × 4.8 × 2.1 Oval	Weathered	Pebble-butted.
*4-7	Flake	Oval	Fresh	Bulb of percussion present. Striking platform on a flat flake-scar; angle 110°.
4-9	Do.	Blade-like	Slightly weathered.	
4-10	End-scraper	"Duck-bill" type	Fresh	Flake. End has fine retouching.
4-22	Flake	....	Do.	Bilaterally symmetrical flake-scars on the dorsal face.
4-23	Worked flake	....	Do.	
*4-32	Do.			
*4-34	Do.			
SITE 5.				
*5-5	Worked chip	4.9 × 3.0 × 1.4 Triangular.	....	Quartz. Flat butt with the original pebble cortex.
SITE 10.				
10-1	Abbevillian hand-axe.	13.0 × 8.7 × 4.6 Dagger-like.	Not rolled; very slightly weathered.	Made from a pebble. The butt and the ventral face have the original pebble cortex. Dorsally, there are two large longitudinal flake-scars, and some stepped flake-scars along the right margin.
10-18	Do.	10.1 × 7.6 × 3.4 Oval	Weathered	Coarse-grained. Made from a split pebble. Bulb of percussion and a flake-scar as striking platform seen on the ventral face. Angle about 110°. Five large flake-scars dorsally. Tip flat.
*10-17	Acheulean hand-axe.	10.4 × 5.6 × 3.2 Elongated oval.	Fresh	Made from the side of pebble. Transverse flake-scars along the margins on the dorsal face. Lower end thin.
10-25	Small hand-axe	6.8 × 5.7 × 2.5 Oval	Do.	Made from a flake. Pebble cortex at the butt. Very fine flaking and retouch.
10-29	Do.	6.3 × 5.3 × 2.8	....	Quartz. Made from a core. Worked all over.
*10-24	Core, elongated	10.6 × 7.0 × 3.5	Fresh	Pebble cortex ventrally.
*10-21	Chip	....	....	Quartz.
10-13	Graver	4.2 × 1.9 × 0.4	Fresh	Quartz. Very thin flake of quartz. Plate VI (h).
10-22	Flake from the side of a pebble.	....	....	Quartz.
*10-7	Worked flake	....	....	
10-30	Worked core	....	Rolled; smooth.	
SITE 11.				
11-5	Abbevillian hand-axe.	13.2 × 10.3 × 4.8 Irregular.	Fresh	Recent locking, though crude. Made from a split pebble. Rough step-flaking along the right margin and the lower half dorsally. Bold free flaking ventrally.



Field No.	Type.	Size and shape.	Condition.	Description.
*11-16	Abbevillian hand-axe.	9.2 × 7.7 × 3.0 Ovale	Weathered and laterite tinted.	Crude step flaking. Pebble surface ventrally. Flaked dorsally.
11-40	Acheulean hand-axe.	10.2 × 6.5 × 3.2	Unrolled; slightly weathered.	Made from a pebble. Pebble cortex present on the butt and upper halves of both the sides. Thin longitudinal flake-scars dorsally as well as ventrally. Due to weathering, this tool, though more evolved in technique, appears older than the above one.
*11-39	Do.	9.9 × 7.7 × 2.6 Broad oval.	Not weathered	Finely flaked all over. Stepped flake-scars. Thin point.
11-15	Do.	8.2 × 6.4 × 3.4 Thin	Tip broken; laterite tinted.	Pebble-butted. Finely flaked.
*11-10	Do.	8.0 × 5.4 × 2.4 Thin	Do.	Similar to the above, but more weathered.
11-7	Pebble butted chopper.	7.0 × 7.7 × 3.3	Weathered; laterite tinted.	Made from a pebble. Side and lower end roughly chipped. Stepped flake-scars.
11-30	Small hand-axe. Late Acheulean.	6.4 × 4.0 × 2.4 Lanceolate.	Slightly rolled and smooth; tip broken.	A fine tool: fine transverse flake-scars.
11-29	Scraper	7.0 × 5.5 × 1.7 Oval	Not weathered; slightly rolled.	From a thin flake. Ventrally the original pebble cortex. Fine controlled and stepped flaking all along the dorsal margins.
*11-35	Borer	6.2 × 6.1 × 1.8	Not weathered	Thin; flaked to a short point.
*11-25	Worked pebble.			
11-8	Do.			
11-28	Do.			
*11-26	Do.			
*11-24	Core.			
*11-9	Do.			
11-32	Do.	....	....	Fresh. Discoidal flake with alternate flaking along the margins.
*11-33	Flake	....	....	Blade.
*11-20	Do.			
11-12	Do.	Long and thin	....	Almost like a thin cleaver.
*11-31	Do.	Semi-circular.		

## SITE 12.

*12-21	Pebble tool. Early Abbevillian.	10.1 × 7.3 × 3.4 Pear-shaped.	Not rolled; fresh; tip broken.	Thin pebble. Bold, free flaking, only towards the lower end.
12-34	Do.	9.2 × 5.9 × 4.4 Very roughly oval.	Rough; slightly weathered.	Made from a four-sided pebble. Free flaking on three sides. Stepped flake-scars. Pointed end triangular in section.
12-30	Hand-axe. Late Acheulean.	10.1 × 9.5 × 3.2 Thin	Unrolled; slightly weathered; lower half broken off.	Fine, thin flaking. Many stepped flake-scars on parts of the margin.
12-31	Pebble chopper	6.8 × 5.9 × 3.3	Weathered and rough	Flat-butted pebble finely flaked along the edges ventrally. Dorsally irregularly flaked.



Field No.	Type.	Size and shape.	Condition.	Description.
*12-22	Small hand-axe	7.5 × 5.5 × 2.6 Oval	Unrolled; slightly weathered.	Ventral side entirely of the original pebble cortex. Dorsally finely flaked all over. Stepped flake-scars along the left margin. Right edge almost bevelled by three flake-scars in one sloping plain. Perhaps used as a scraper.
*12-17	Do.	5.4 × 3.5 × 2.6 Elongated oval.	Slightly rolled	Made from a small core. Flaked all over. Fine, short point.
*12-48	Hand-axe	9.8 × 6.4 × 3.6 Oval	Weathered; not rolled.	Made from a longish pebble. Butt unflaked. Heavily stained red by laterite. Gritty on the surface.
12-49	Broad-edged chopper.	7.9 × 7.6 × 2.6 Triangular.	Do.	Pebble cortex at the butt side. Straight cutting edge.
12-16	End-scraper on core	5.5 × 4.5 × 1.9	Not rolled	Ventrally, original pebble surface. Dorsal face finely flaked. Lower margin retouched. Butt flat.
12-14	Do.	5.6 × 5.8 × 2.3	Do.	Split pebble. Lower margin on the pebble side finely chipped.
*12-20	Discoidal coroid	7.6 × 7.3 × 4.0	Fresh	Finely flaked. Lower margin hollowed by a single deep flake-scar. May have been used as hollow scraper.
*12-9	Do.	7.7 × 6.9 × 3.5 Low cone	....	Ventrally flat. Finely flaked on the conical dorsal face.
*12-4	Core	5.0 × 4.5 × 2.6 Irregular	....	
12-25	Worked core	8.8 × 8.4 × 3.8	Weathered; not rolled.	Ventral pebble surface rounded, cracked and sandstone-like.
*12-36	Flat worked flake	11.3 × 7.8 × 2.5 Thin	....	An unfinished Acheulean hand-axe.
12-7	Pebble, chipped	11.1 × 7.0 × 5.0	....	An unfinished tool (?)
*12-12	Flake	....	Fresh	Worked.
12-43	Do.	....	Do.	Longitudinal flaking.

## SITE 13.

13-11	Abbevillian hand-axe.	10.6 × 8.5 × 3.8 Oval	Very slightly weathered.	Made from a split half of a pebble. Ventral side nearly flat with three thin flake-scars. Dorsally, chipped only along the margins.
*13-21	Do.	8.3 × 8.3 × 4.0 Roughly rhomboidal.	Do.	Made from an entire pebble. Pebble cortex at the butt end. Stepped flake-scars on the ventral side converging at the broad, pointed end. Fresh-looking and smaller flake-scars along the right side, dorsally. Probably re-chipped.
13-23	Do.	11.0 × 7.2 × 4.8 Ovate	Do.	Unfinished tool made from a pebble. Ventral surface nearly horizontal but for a deep flake-scar at the tip, and irregular chipping along the left side. Dorsally there is only one large flake-scar near the tip.
*13-17	Do.	9.2 × 5.2 × 4.2 Pointed oval.	Somewhat weathered	Thick-butted. Roughly chipped. Tapering point.
13-4	Do.	9.3 × 7.8 × 4.0 Pointed oval.	Weathered; laterite stained.	Squat. Thickest near the butt. Crudely flaked.
*13-15	Do.	12.5 × 8.2 × 3.3 Pointed oval.	Do.	Thin. Made from the split half of a pebble. Bold flaking. Curved point. Pebble cortex at the butt.



Field No.	Type.	Size and shape.	Condition.	Description.
*13.45	Abbevillian hand-axe.	11.8 × 7.3 × 4.8 Ovate .	Weathered ; laterite stained ; not rolled.	Made from a core. Flaked boldly all over, the blows directed more or less to the centre. Working end broad, battered.
*13.6	Do.	9.2 × 6.4 × 3.8 Pointed oval.	Do.	Made from a pebble. Roughened by weathering. Crudely flaked. Pebble cortex on the butt and the right side which is nearly vertical. Flaked chiefly from the other side. Probably a discarded tool.
13.20	Do.	10.3 × 9.9 × 6.6 Triangular.	Not rolled ; brownish patina.	Heavy. Made from a thick pebble. The original pebble cortex at the nearly horizontal butt. Medium sized stepped flake-scars. The short tip is thinned by bold step-flaking. Crude tool.
13.28	Do.	11.8 × 8.4 × 4.6 Pointed oval.	Not rolled ; laterite stained ; tip broken.	Made from a pebble. Original pebble cortex remains on the butt and about half of the dorsal surface. Three longish flake-scars dorsally. Free and stepped flaking ventrally.
*13.36	Do.	8.6 × 7.2 × 5.2 Pointed oval.	Do.	Made from a pebble. Thickest at the butt end. Tapering to a thin tip (broken) which has been reduced to thinness by step-flaking.
*13.16	Unfinished hand-axe.	13.8 × 8.0 × 4.0 Elliptical.	Fresh ; unweathered	Made from a split pebble of refractory material. Original pebble cortex at the butt and the vertical sides. Stepped flaking.
13.37	Chipped pebble	6.3 × 5.2 × 4.0 Irregular	Do.	From a small pebble. A slightly concave cutting-edge is produced by a stepped flake-scar dorsally and a corresponding one ventrally.
*13.12	Do.	6.0 × 5.8 × 4.0 Roughly rectangular.	Slightly patinated	Straight cutting edge. One flake-scar on each side.
13.49	Acheulean hand-axe.	14.5 × 8.9 × 6.5 Ovate .	Do.	Made from a large pebble which has been worked only dorsally, the pebble cortex remaining over three-fourths of the surface. The tongue-shaped working end is formed by the intersection of a dorsal re-chipped flake-scar with the pebble cortex ventrally. Small stepped flake-scars along the upper half of the left side. Must have been an efficient tool, probably used unhafted.
13.3	Acheulean Chopper or hand-axe.	13.0 × 9.2 × 4.7 Elliptical.	Fresh . . .	Worked only dorsally, the ventral surface being entirely of the original pebble cortex. Minute stepped flake-scars on the right half of the upper and lower margins.
*13.18	Acheulean hand-axe.	8.5 × 7.1 × 2.7 Tip broken.	Do. . . .	Thin tool, probably made from a flake. Edges nearly straight and sharp. Stepped flake-scars throughout. Original pebble cortex seen near the butt.
13.13	Do.	9.9 × 6.8 × 2.8 Ovate .	Slightly weathered ; laterite tinted.	Thin tool ; flaked all over. Very nearly straight edges. Controlled and stepped flake-scars.
*13.30	Do.	8.6 × 6.2 × 3.6 Squat oval	Slightly weathered ; brown patina.	Flaked all over. Mostly fine controlled flaking with some stepped flaking along the margins.



Field No.	Type.	Size and shape.	Condition.	Description.
*13-1	Achenlean hand-axe.	10.4 × 6.0 × 2.4 Pointed oval.	....	Quartz. Made from a flake. Flat and little worked ventrally. Transverse median section is almost triangular. Fine stepped flake-scars. Straight edges and thin point.
*13-52	Do.	9.3 × 6.8 × 2.9 Triangular	....	Quartz. Made from a moderately thick flake. The dorsal and ventral surfaces nearly flat. Pebble cortex on the butt and left side. Short point.
13-51	Do.	9.7 × 7.1 × 3.2 Pear-shaped.	....	Quartz. Made from a pebble. Pebble cortex on the butt end. Roughly flaked. Crude step flaking. Thick blunt point.
13-7	Do.	8.0 × 6.5 × 3.3 Triangular	Unrolled; laterite stained.	Straight butt showing the original pebble cortex. Free flaking.
13-2	Coroid	8.0 × 6.2 × 3.2 Rhomboidal.	Fresh	Stepped and free flaking. Zig-zag edges.
13-5	Flake. Chactonian-like.	10.3 × 7.9 × 2.8 Semi-circular.	Slightly weathered	Oblique flake from the side of a square-sided pebble. The sharp edge is formed by the intersection of a ventral and another dorsal flake-scar. The direction of the blows are nearly the same for both.
*13-34	Flake	8.3 × 5.1 × 1.6 Tongue-shaped.	Not weathered	Probably intended as a thin hand-axe.
*13-47	Diminutive hand-axe.	5.8 × 3.6 × 1.6 Roughly oval.	Do.	Tip broken. Lance-head (?).
13-26	Awl-like tool	7.4 × 5.6 × 2.8	Do.	Made from a split pebble. Thin point with a distinct "neck".
13-42	Do.	3.7 × 3.6 × 1.5	Somewhat rolled	Made of fine-grained quartzite of pale colour. Point blunted.
*13-9	Point	6.4 × 3.5 × 1.4	Not rolled or weathered.	Thin flake, with a triangular point, with minute stepped flake-scars along the margins.
*13-54	Do.	6.4 × 4.2 × 2.0 Oval	Do.	Thick flake. Stepped flake-scars along the right and left margins. Broad, thin working end.
13-19	Hollow scraper (?)	8.5 × 5.4 × 2.8 Nearly rectangular.	Do.	Absolutely flat. Ventrally stepped flake-scars above the concave edge. An attempt has been made to make a broad cutting edge at the lower end.
*13-44	Worked flake	7.0 × 5.5 × 2.0	Somewhat rolled. Greyish patina.	Ventrally flat. Controlled flaking dorsally, with stepped flake-scars along the right margin.
13-39	Do.	6.8 × 4.0 × 1.5	Fresh.	
13-33	Worked core	7.0 × 5.5 × 3.8	Weathered and laterite tinted.	
13-32	Do.	5.4 × 4.1 × 3.1 Irregular	Very fresh.	
13-24	Worked flake	8.3 × 6.8 × 2.0	Slightly weathered.	
SITE 14.				
14-24	Pebble tool. Abbevillian.	12.3 × 8.8 × 4.6 Pear-shaped.	Weathered; rough to the touch; tinted by laterite.	Made from a pebble. Chipped on the lower half. Thin pointed end produced by two stepped flake-scars.
14-13	Achenlean hand-axe.	8.9 × 5.3 × 3.1 Ovate	Do.	Tip broken. Worked all over. Several small stepped flake-scars.



Field No.	Type.	Size and shape.	Condition.	Description.
14-10	Acheulean hand-axe.	9.4 × 6.2 × 4.5 Triangular.	Very slightly weathered.	Thick-butted and tapering to a flat thin point. Bold free flaking combined with step-flaking.
*14-1	Do.	12.1 × 7.9 × 4.7 Pointed oval.	Do.	Heavy. Made from a core of tough quartzite. Sharp point. Fine stepped flake-scars.
*14-4	Do.	10.5 × 6.8 × 3.1	Fresh	Made of purple quartzite. Rough finish. Flaked all over except for a patch on the dorsal side where a ridge of the original pebble cortex is left between stepped flake-scars. Ventral surface nearly flat. Thin point.
*14-3	Do.	8.1 × 6.3 × 3.9 Ovale	Rolled	Made of haematite. Nearly straight edge. Thin sharp working end. Ventral surface nearly flat except for minute step-flaking along the margins. Dorsally, moderate sized scars formed by free flaking directed towards the middle point of this surface.
14-9	Pick	10.6 × 5.1 × 2.5 Faciform	Slightly weathered; brown patina.	Flaked all over. Dorsally, bold transverse flake-scars meeting at a median longitudinal ridge. Ventrally also transverse flakes, but less regular.
*14-5	Flake	8.6 × 4.7 × 1.8	Weathered; laterite tinted.	Thin flake worked on both sides. Damaged.
*14-8	Do.	6.4 × 4.0 × 2.0	Slightly weathered	Blade (?)

## SITE 15.

*15-2	Abbevillian hand-axe.	12.8 × 7.5 × 5.4 Pointed oval.	Not rolled; brown patina; laterite tinted with pellets of laterite adhering in a few places.	Crudely made from a pebble. Fine thin point made by bold step-flaking.
*15-3	Acheulean hand-axe.	9.5 × 5.6 × 2.8 Irregular	Weathered and worn	Dark brown, coarse, thin. Flaked all over. Controlled flaking. Retouched. Tip broken.
15-1	Hand-axe	9.0 × 5.8 × 4.0 Pointed oval.	Almost fresh	Unfinished tool (?). Made from an entire pebble. Worked only ventrally. Sharp working end.
15-4	Do.	8.1 × 6.8 × 2.5 Pointed oval.	Do.	Intended probably as a thin hand-axe.
15-5	Do.	8.9 × 6.2 × 3.8 Pointed oval.	Do.	Quartz. Thickest at the butt. Flakes all over. Point thin and fine. Sides straight.

## SITE 20.

*20-2	Small hand-axe. Advanced Acheulean.	7.8 × 4.9 × 2.3 Oval	....	Quartz. Flaked all over. Thin longitudinal flake-scars on the ventral face. Series of parallel stepped flake-scars dorsally.
*20-3	Broken half of a hand-axe. Advanced Acheulean.	8.8 × 5.4 × 2.9	Weathered; broken.	tip Made from a thick flake. Thin flake-scars.
20-13	Very small tool like a hand-axe.	4.8 × 4.0 × 2.2 Oval	....	Quartz. Large stepped flake-scars on both faces.
*20-1	Worked core	6.3 × 5.5 × 3.9	Weathered	
20-8	Do.	8.1 × 8.0 × 3.5	Do.	Fine Acheulean flaking. Retouched at a later time.
20-7	Do.	6.8 × 4.6 × 3.7	Fresh.	



Field No.	Type.	Size and shape.	Condition.	Description.
SITE 29.				
*29.12	Abbevillian hand-axe	13.2 x 7.4 x 4.6 Oval	Not rolled; slightly weathered.	Made from a pebble. The original pebble cortex remains on most of the upper half. Transverse stepped flaking. Point flat.
29.63	Do.	11.4 x 10.2 x 4.6 Triangular.	Do.	Made from a split pebble. Pebble side unworked. On the main flake-scar side, crude transverse flaking along the sides. A rugged point.
*29.78	Pebble Chopper. Abbevillian.	9.3 x 6.4 x 3.4	Not worn; slightly weathered.	Made from a flat pebble. Chipped only on the lower margin dorsally. Nearly straight cutting edge.
29.109	Do.	9.7 x 5.3 x 4.6	Not rolled; patchy brown patina.	Roughly chipped on both sides. Cutting edge irregular.
29.23	Do.	10.8 x 7.0 x 3.8 Oval	Not rolled; fresh	Made from a pebble. Bold free flaking. Flat, thin point. Though typologically primitive the tool looks late.
*29.14	Do.	10.0 x 7.0 x 4.0 Oval	Do.	Pebble-buttressed like the above. The lower end is a long drawn-out point. Large, but thin flake-scars, which suggest mastery over the material as in the above tool.
*29.123	Pointed pebble tool. Abbevillian.	7.6 x 7.4 x 4.2 Triangular.	Fresh	Pebble chipped at the lower end only. Free flaking. Small-sized flake-scars.
29.86	Broad edged pebble tool. Abbevillian.	8.0 x 7.0 x 5.0 Semi-circular.	Not rolled or weathered.	Quartz. Material not uniform. Series of rough stepped flake-scars dorsally. Irregular cutting edge.
*29.108	Do.	7.7 x 6.8 x 4.2 Semi-circular.	Do.	Small flake-scars. Cutting edge irregular.
*29.62	Pebble chopper	9.0 x 7.5 x 5.0	Fresh; unrolled	Made from the end of a pebble. Ventrally one large flake removed. Dorsally three or four small flakes chipped off from near the lower margin.
*29.43	Do.	6.6 x 6.6 x 4.0	Do.	Cf. above, but smaller flakes removed from the lower end on both faces. Pointed end. (But for their finer flaking and the extreme freshness, 29.62, 29.43 and 29.15 are like the earliest pebble tools.)
29.15	Do.	8.2 x 7.0 x 4.4	Do.	The pebble is flat on the ventral face. Flaked only dorsally. Thin stepped flake-scars.
29.3	Acheulean hand-axe.	9.2 x 6.7 x 3.1 Oval	Rough; weathered and stained by laterite.	Made from a flake. The flat main flake-scar has been further chipped twice or thrice. Dorsally, a large flake-scar intersecting the main one opposite, forms the broad cutting edge.
*29.41	Do.	7.7 x 6.5 x 3.0 Oval	Not rolled; slightly weathered.	Ventral side has the pebble cortex. Dorsally finely flaked all over.
29.59	Do.	8.8 x 6.4 x 3.1 Oval	Not weathered; not rolled.	Made from side of a pebble. Pebble cortex on the upper half of the ventral side and butt. Fine flaking. Several stepped flake-scars. Lower end, thin and broad.
*29.40	Do.	9.0 x 6.5 x 3.4 Rugged surface and irregular margin.	Not rolled; slightly weathered.	Worked all over. Irregularly flaked.
29.58	Do.	9.1 x 6.0 x 3.0 Nearly oblong.	Do.	Flat ventrally. Roughly flaked on the dorsal face. Original pebble cortex on the butt and on one side. A short point.



Field No.	Type.	Size and shape.	Condition.	Description.
29-20	Acheulean hand-axe.	8.7 × 6.2 × 3.0 Nearly triangular.	Not rolled; slightly weathered.	Pebble-butt. Flat, somewhat broad, lower end.
*29-118	Acheulean disc	9.0 × 7.9 × 3.6 Nearly circular.	Not rolled; brown patina.	Made from a flat core. Unevenly flaked. Step-flaking near the margins.
29-125	Do.	6.6 × 6.5 × 2.6 Nearly circular.	Not rolled; no patina.	Made from a thin flake from the side of a pebble of greyish blue material. Finely flaked. Pebble cortex present on one half of the dorsal surface.
*29-80	Acheulean Ovate	9.9 × 7.0 × 2.6	Not rolled; fresh-looking.	Made from a very thin pebble. Unflaked ventrally, except near the working end. Crude step-flaking dorsally, but fine secondary working near the tip.
29-100	Do.	10.2 × 7.7 × 3.0	Do.	Flaked all over. Nearly flat, ventrally. Series of step-flaking dorsally.
*29-120	Do.	8.1 × 7.8 × 2.8	Do.	Roughly made. Thin. Part of the pebble cortex remains on the dorsal surface.
29-119	Do.	8.7 × 6.5 × 1.7 Very thin	Slightly patinated	Made from an extremely thin flake. Very thin stepped scars near the working end.
29-105	Do.	8.1 × 6.4 × 2.9 Oval	....	Well made quartz tool, with nearly straight edges. A few stepped scars near the tip and on the margins.
*29-133	Do.	9.5 × 6.0 × 3.1 Pointed oval.	....	Nearly flat ventrally. Ridged back. Fine, thin tapering point.
*29-87	Hand-axe La Micoque-like.	9.1 × 6.8 × 3.3 Pyriform	Brown patina	Made from a half pebble. Ventrally flat and flaked all over. Dorsally, the butt end has the original pebble cortex. Thin working end. Stepped flaking absent.
*29-83	Pick	9.8 × 4.9 × 2.3	Fresh	Ventrally flat with pebble cortex. Dorsally, irregular controlled, and stepped flaking.
29-81	Acheulean hand-axe.	7.5 × 4.6 × 2.3 Oblong	Brown patina	Made from the side of a pebble. Dorsally the pebble cortex is unworked. Ventrally, transverse flaking.
*29-73	Thin hand-axe	7.4 × 6.7 × 1.8 Irregular	Tip broken; light brown patina in parts.	Made from a thin flake. Ventrally controlled flaking on the main flake-scar. Dorsally, the edges bevelled by oblique step-flaking.
29-128	Do.	8.8 × 6.7 × 1.8 Irregular	Fresh	Almost similar to the above, particularly in the bevelling of the edges. The bevelling has produced straight cutting edges.
29-122	Small hand-axe	7.8 × 7.0 × 2.1	Butt broken; very light brown patina.	Made from a split pebble. Free transverse flaking.
*29-106	Do.	7.4 × 5.0 × 1.9 Pyriform	Almost fresh	Very thin. Long, drawn out and thin working end. Bold, longitudinal controlled flaking.
*29-115	Do.	7.5 × 4.3 × 2.8 Pointed oval.	Do.	Made from an irregular core. Seems to have been rechipped, only one large flake-scar being fresh-looking. The rest of the surface has a deep brown patina. Worked mainly towards the tip and right side dorsally. Thin point.
*29-129	Do.	6.3 × 5.1 × 1.8 Cordate	Do.	Thin. Sharp all round. Stepped flaking.



Field No.	Type.	Size and shape.	Condition.	Description.
29.84	Small hand-axe	7.1 x 4.5 x 1.8 Pyriform	Almost fresh	Tip broken. Made from the side of a pebble. Ventrally flat. Dorsally, longitudinal flaking near the tip.
*29.96	Do.	7.4 x 4.5 x 2.2	Light brown patina	Ditto.
*29.44	Do.	7.7 x 5.6 x 2.9 Oval	Not rolled or weathered.	Flaked all over except a small area on the dorsal right margin which still has the original pebble surface. Thin lower end.
*29.7	Do.	8.0 x 3.4 x 2.9 Oval	Slightly weathered	Made from the side of a pebble. Pebble cortex on the dorsal face. Roughly flaked.
29.60	Scraper	6.6 x 4.2 x 2.1 Roughly semi-circular.	Not rolled or weathered.	Stepped flake-scars ventrally. Dorsally one steep flake-scar parallel to the cutting edge which is therefore bevelled.
*29.126	Hollow scraper	8.4 x 5.8 x 2.1 Crescent-shaped.	Do.	Made from a flake. Concave-convex. On the convex margin the original pebble cortex remains. Nearly flat on both sides. The scraper edge is produced by oblique secondary flaking on the lower, main flake-scar side.
29.89	Do.	7.5 x 5.5 x 13.0 Nearly semi-circular.	Light brown patina	Thick. Made from the side of a pebble, the cortex of which remains on the upper half of the dorsal surface. Lower half worked. The left half on the ventral side is chipped hollow by step-flaking. Beyond the hollow, the upper margin is blunted. The straight lower margin is usable as a side-scraper.
29.4	Blade	5.4 x 3.3 x 1.5		Quartz. Very clear. An unquestionably genuine artifact. Ventrally two longitudinal flake-scars. Dorsally the original cortex of the quartz is seen. Cutting-edge formed by a large longitudinal flake-scar which meets a similar one opposite. Plate V (f).
29.91	Do.	8.3 x 4.0 x 1.8 Faciform	Light brown patina	A long flake. The flat pebble cortex on part of the upper margin. Lower margin bevelled. The cutting edge is nearly straight.
29.111	Awl	5.1 x 2.7 x 1.6	Do.	Made from a thick flake. Ventrally the unworked main flake-scar. Dorsally, the upper right half is made of the original pebble cortex. The lower right half hollowed out to form the neck. Fine secondary work along the left margin. The point is triangular in section.
29.102	Do.	4.3 x 3.4 x 1.5 Oblong with a short nose.	....	Quartz. Thin flake. Upper margin blunted to form a "back". Nose formed by the meeting of two oblique scars on the lower margin. <i>Of. A-30.</i>
*29.101	Do.	6.4 x 5.0 x 1.5 Pointed oval.	Tip broken	Quartz. Thin flat sharp-butted flake. Short point.
*29.131	Do.	7.5 x 4.7 x 1.5 Irregular	....	Thin flake with an elongated thin point.
*29.18	Planing tool on a core.	12.0 x 10.2 x 4.5 Low cone.	Fresh	The flat ventral side is the original pebble surface. The slightly sloping flake-scars intersecting the pebble surface give the plane edge.



Field No.	Type.	Size and shape.	Condition.	Description.
*29-76	Coroid. Acheulean	6.3 x 5.7 x 2.1 Oblong ; thin.	Slightly rolled ; dark brown patina.	Fine controlled flaking on both dorsal and ventral sides patina. This gives the tool a definitely old appearance.
29-98	Core	8.2 x 5.5 x 4.6 Irregular	Not rolled.	
29-95	Do.	7.5 x 5.5 x 3.4 Irregular	Fresh.	
*29-117	Do.	8.7 x 7.8 x 2.9 Rhomboidal.	Do.	Nearly flat ventrally.
29-113	Do.	5.6 x 4.5 x 2.6 Nearly circular.	Do.	Neatly flaked.
29-112	Do.	6.2 x 5.6 x 4.4 Lumpy ; irregular.	Slightly rolled	Bluish grey quartzite.
29-85	Elongated coroid	7.5 x 4.9 x 3.0	Not rolled ; patches of brown patina.	
29-124	Do.	6.8 x 5.2 x 3.0	Do.	
*29-6	Worked Core	7.1 x 5.6 x 2.8.		
*29-11	Do.	8.6 x 7.5 x 2.6.		
*29-21	Do.	5.4 x 5.4 x 2.8.		
*29-22	Do.	5.4 x 5.0 x 2.9.		
29-27	Do.	5.6 x 3.5 x 2.1.		
*29-28	Do.	4.2 x 3.7 x 2.4.		
29-30	Do.	7.2 x 5.6 x 3.3.		
29-37	Do.	5.7 x 4.6 x 2.0.		
*29-53	Do.	5.2 x 4.8 x 2.9.		
29-60	Do.	4.6 x 4.5 x 2.2.		
29-70	Do.	5.2 x 5.0 x 2.0.		
*29-74	Worked flake.			
*29-75	Do.			
29-107	Do.			
29-127	Do.			
*29-48	Do.	10.4 x 6.5 x 2.7	Weathered	Flat flake chipped along the sides.
*29-71	Flake	8.3 x 6.5 x 2.6	....	Quartz.
29-45	Do.	8.8 x 6.7 x 2.3	....	
29-49	Do.	7.7 x 5.8 x 1.4	....	Quartz.
SERIES 30.				
30-98	Pebble tool. Pre-Stellenbosch type.	9.3 x 8.2 x 5.7 Inverted U-shape.	Brown patina	Thick pebble. Two stepped flake-scars dorsally, and a very large unstepped one on the opposite side. Cutting edge nearly straight.
*30-95	Do.	6.4 x 5.7 x 4.6 Pointed	Light yellow brown patina.	Small pebble. Roughly flaked to produce a crude short pointed working end.
30-103	Do.	7.2 x 5.2 x 5.7 Squat oval	Light brown patina	Roughly worked. Very irregular working end.



Field No.	Type.	Size and shape.	Condition.	Description.
*30-74	Flake Chopper. Abbevillian- Acheulean.	8.2×6.8×2.3 Reniform	Yellowish brown and brown patina.	Made from a flake. The ventral main flake-scar side bevelled along the lower margin. The upper half of the dorsal surface has the original pebble cortex. The lower margin chipped; flake-scars small. Nearly straight cutting edge.
*30-137	Pebble Chopper. Abbevillian- Acheulean.	10.5×9.4×5.6 Nearly trapezoid.	....	Quartz. Made from a pebble. Right side of the ventral surface unworked. Cutting edge formed by the inter- section of the worked dorsal face with the pebble cortex.
*30-97	Do.	7.8×6.8×3.7 Oval	....	Quartz. Worked except at the butt and part of the right dorsal half.
30-72	Acheulean hand- axe.	9.4×6.3×2.9 Ovale	Rolled; light brown patina.	Made from a core. Thin controlled flaking. Stepped retouch along the sides.
*30-59	Do.	11.5×7.6×3.0 Ovale	Fresh . . .	Made from a thin pebble of purple quartzite. Dorsally, the upper half has the original pebble cortex; lower half has fine controlled flaking. Ventral surface similar except for a large flake which has been struck off from the upper half; this large scar is flanked on the right and left by the original pebble cortex. Some stepped flake-scars along the margin. Edge nearly straight and sharp.
*30-79	Do.	8.8×6.0×2.7 Irregular	Weathered; laterite stained.	Ill-made, from a thin flake of a pebble.
30-92	Do.	9.3×7.1×3.1 Ovale	Very slightly wea- thered.	Made from the side of a pebble. Pebble cortex remains on the right half of the dorsal surface. Sharp all round. Stepped flake-scars all over.
*30-87	Do.	9.6×7.1×3.3 Ellipti- cal; broad.	Do.	Similar to the above. Pebble cortex in the middle of the dorsal surface. Edges less regular than in 30-92 and flaking less fine.
*30-107	Do.	10.0×6.0×2.9 Irre- gular.	Fresh . . .	Flaked all over. Edges nearly straight.
30-1	Hand-axe. Late Acheulean.	12.0×9.4×3.5 Oval; thin.	Do. . . .	Flaked all over. Large thin flake- scars; stepped flake-scars particular- ly near the margin.
*30-16	Do.	9.5×6.8×2.3 Oval; very thin.	Do. . . .	Very thin flake-scars. Minute stepped scars only near the pointed end.
30-99	Ovale. Late Acheulean.	7.9×7.4×2.9 Squat; triangular.	Slightly weathered; rust-like patina.	A very finely finished tool of deep purplish quartzite. Edges straight and sharp all round. Ventrally a few fine thin flake-scars and dorsally fine stepped flake-scars.
30-105	Do.	8.5×5.3×2.6 Pointed oval.	Tip broken . . .	Quartz. Coarse, worked all over; step- ped flaking.
30-73	Do.	7.5×6.6×3.0 Pointed oval.	....	Quartz. Pebble cortex at the butt end. Nearly flat on both sides. Point blunted.
*30-101	Do.	8.2×7.2×2.9 Trian- gular.	....	Quartz. Made from a thick flake. Pebble cortex on part of the dorsal surface. Stepped flaking mainly on the lower half of the dorsal side. Right ventral margin bevelled.



Field No.	Type.	Size and shape.	Condition.	Description.
30-106	Ovate. Late Acheulean.	7.3×6.7×2.7 Pyriform (when entire).	Only slightly weathered.	Damaged. Made from a flake from the side of a pebble. Pebble cortex on the butt. Minute longitudinal stepped flake-scars.
30-66	Do.	7.6×6.4×2.5	Do.	Similar to the above.
*30-125	Do.	8.0×5.5×2.6 Nearly triangular.	Fresh	From a flake from the side of a pebble. Ventrally (main flake-scar) unworked. Free flaking dorsally. Thin broad tip.
30-64	Pick	10.8×5.6×3.4	Fresh-looking	Made from a core. Transverse flaking dorsally. Both the ends thin.
30-113	Coroid	6.2×5.2×2.2 Discoidal	Weathered; reddish brown patina.	Ventral side flat.
30-84	Do.	5.8×4.4×2.7 Discoidal	Very slightly weathered.	Ventrally, pebble cortex.
30-91	Do.	6.0×5.0×2.4 Discoidal	Weathered; darker brown on the pebble surface.	Ditto.
*30-93	Do.	6.0×5.8×2.8 Discoidal	Dark brown patina.	
*30-111	Do.	3.8×3.9×2.2 Discoidal	Brown patina.	
30-43	Do.	Small	Somewhat weathered; brown patina.	
*30-8	Do.	9.7×8.4×5.0 Large	....	Quartz.
*30-10	Do.	Small	....	Ditto.
*30-114	Do.	5.0×4.7×2.2 Discoidal	Rough. Light brown patina.	Chipped on both faces.
30-136	Do.	6.0×5.8×2.5 Discoidal	....	Made of bluish green mottled quartzite. Edge nearly straight. Surfaces smooth. Alternate flaking.
*30-112	Do.	6.6×4.2×2.8 Elongated	Yellowish patina	Ventrally pebble cortex. Transverse flaking on the surface opposite.
30-68	Do.	7.0×6.6×2.9 Irregular	Brown patina, slight only.	
30-70	Do.	8.2×6.4×2.0 Elongated	Very fresh	Whitish quartzite. Ventrally purple pebble cortex. Thinish.
30-78	Do.	6.1×5.0×2.5 Elongated	Slightly weathered	More or less flat ventrally. Roughly chipped.
30-117	Chopper from a flake.	11.7×7.3×2.7 Broad faciform.	Fresh-looking	Quartz. Made of a flake from the side of a pebble. Ventral surface flat and is the main flake-scar itself. Dorsally, the upper half chipped. Lower half has the pebble cortex which intersects the main flake-scar. Butt blunted. The upper margin below the butt is sharp on the right and left sides.
*30-127	Tranchet-like tool.	5.2×4.0×2.8 Triangular.	Slightly weathered	Dorsal surface is formed by three flake-scars. Those on the opposite side are less symmetrically disposed. Retouching along the straight cutting edge on the ventral surface.
*30-86	Disc	7.8×6.8×1.8 Circular	....	Made from a thin flake. Margin bevelled.
*30-61	Concave scraper	7.3×6.0×2.4 Reniform	Fresh	Made from a core. Finely flaked on both surfaces. The concavity formed by a large flake-scar.



Field No.	Type.	Size and shape.	Condition.	Description.
*30-60	Side-scraper, convex	6.0 × 4.8 × 1.2 Oblong	Slightly weathered; brownish patina.	Made from a flake. The scraper edge is bevelled by steep oblique flaking.
30-134	Do.	4.6 × 3.4 × 1.7 Ovate	Do.	Made from a small core. Ventral surface nearly flat with only two moderately large flake-scars. Dorsal surface arched and has converging flake-scars. Right margin retouched.
30-90	Side-scraper	5.5 × 4.5 × 2.5 Semi-circular.	Fresh	Made from the split half of a pebble. Dorsal surface has the pebble cortex. Ventral surface almost flat; series of step-flaking at the lower and upper margins.
*30-135	Do.	6.3 × 5.1 × 1.0 Roughly oval.	Rough; weathered	Made from a flake from a thin pebble. Straight scraper edge produced by a single large flake-scar.
*30-100	Do. (1)	8.2 × 5.4 × 2.0 U-shaped	Weathered; yellowish brown.	Made from a pebble. Ventrally, pebble cortex. Scraper edge thinned by step-flaking.
30-40	Scraper	5.6 × 5.2 × 1.8 Quarter segment of a circle.	....	Thin flake. Thin flaking. Edges sharp. Straight business end.
*30-71	Side-scraper (?)	8.4 × 4.6 × 1.6 Oval; thin; flat.	Fresh	Made from a thin flake. Sides thinned a series of stepped scars.
*30-67	Diminutive hand-axe.	7.8 × 4.9 × 2.8 Pear-shaped.	Do.	Whitish quartzite. Worked all over. Thin working end.
*30-119	Do.	7.4 × 5.1 × 1.6 Pointed oval; thin.	....	Quartz. Sharp all round. Finely executed tool.
30-63	Do.	8.0 × 4.6 × 2.4 Ovate	Slightly patinated (brown).	Made from a pebble. Longitudinal flaking. Pebble cortex at the butt.
30-118	Do.	6.6 × 4.6 × 2.2 Ovate	Do.	Made from a core. Series of stepped scars on either surface. Very thin point.
*30-122	Do.	6.2 × 4.1 × 1.8 Oblong; thin.	Do.	Ventral surface constituted entirely by the pebble cortex.
30-124	Do.	5.3 × 3.3 × 2.2 Pear-shaped.	....	Quartz. Roughly rhomboidal in section.
30-132	Do.	6.1 × 4.5 × 2.5 Almond-shaped.	....	Quartz.
*30-4	Do.	8.1 × 4.8 × 1.9 Elongated oval; thin.	Weathered	Made from a thin flake.
*30-20	Do.	8.2 × 6.3 × 2.8 Pointed oval.	....	Quartz. Made from the side of a pebble. On the dorsal face, flaked on the right side and near the lower pointed end. Ventrally flaked all over. Fine point.
*30-100	Awl-like tool	4.1 × 3.7 × 1.8	Fresh	Made from a small pebble. Point blunted.
30-110	Do.	4.4 × 3.2 × 1.6	Brown patina	Ditto.
*30-129	Do.	6.3 × 4.5 × 1.0	....	Made from a thick flake of quartz.
30-9	Quartz knife	6.8 × 5.2 × 2.2 Semi-circular; thin.	....	Quartz. Fine straight "knife-edge".
*30-69	Worked flake.			
30-76	Do.			
30-88	Do.			
*30-96	Do.			



Field No.	Type.	Size and shape.	Condition.	Description.
39-104	Worked flake.			
39-115	Do.			
*39-130	Do.			
*39-133	Do.			
39-29	Flake . . . .	.....	.....	Quartz.
39-13	Do. . . . .	.....	Weathered.	
*39-11	Do. . . . .	.....	Do.	
*39-30	Do. . . . .	.....	Not weathered.	
*39-24	Do. . . . .	.....	Do.	
39-18	Do. . . . .	.....	Weathered.	
SITE 35.				
35-2	Pebble tool. Abbevillian.	8.2 x 6.3 x 4.0 . . .	.....	Quartz. Flaked on the lower half of the dorsal surface. The cutting edge is formed by the intersection of the dorsal flake-scar with the pebble cortex on the opposite surface. Cutting edge parallel to the long axis of the pebble.
35-10	Late Acheulean hand-axe.	8.7 x 6.2 x 2.7 Ovate .	Weathered; dark brown patina.	Flaked all over. Edges straight. Fine step-flaking.
*35-4	Do. . . . .	7.2 x 5.3 x 1.7 Ovate; thin.	Light brown patina .	Made from a thin flake. Very even on either face.
35-11	Coresid. . . .	6.5 x 5.7 x 2.8 Elongated	Dark brown patina .	From pebble core.
*35-7	Do. . . . .	7.9 x 5.0 x 2.4 Elongated	Worn and weathered	Ventrally pebble cortex.
35-8	Side-scraper .	5.3 x 3.7 x 1.5 Oblong .	.....	Quartz. A split-pebble chipped on the sides.
*35-9	Small hand-axe .	5.6 x 4.4 x 2.2 . . .	.....	Quartz. Made from a split pebble.
35-13	Awl-like tool .	4.0 x 3.1 x 1.4 Irregular	Slightly weathered .	Made from a thick flake. Point blunt.
35-6	Worked flake .	6.2 x 4.2 x 1.8 . . .	.....	Split half of a pebble. Intended as a small hand-axe (?).
*35-1	Do. . . . .	7.8 x 5.9 x 1.8 . . .	.....	Thin.
SITE 50.				
50-2	Pebble tool. Early Abbevillian.	9.5 x 9.5 x 5.3 Broad oval	Not rolled; no crust	Heavy pebble roughly flaked only on the dorsal side.
*50-3	Flaked pebble .	9.5 x 6.1 x 5.1 . . .	Do. . . . .	Unfinished hand-axe.
50-1	Worked core .	Large . . . . .	.....	Banded quartzite.
*50-5	Do. . . . .			
*50-4	Worked flake.			
50-10	Do. . . . .			
SITE 60.				
60-6	Hand-axe . . .	11.2 x 7.7 x 3.8 Ovate .	.....	Quartz. From a pebble of which about $\frac{2}{3}$ of the dorsal surface alone is chipped. Coarse grained.
60-13	Cleaver . . . .	9.6 x 7.4 x 3.3 Irregular	Rough; Weathered; laterite tinted.	Made from a pebble. Ventrally one large flake-scar, dorsally two. Cutting edge oblique, broken off.

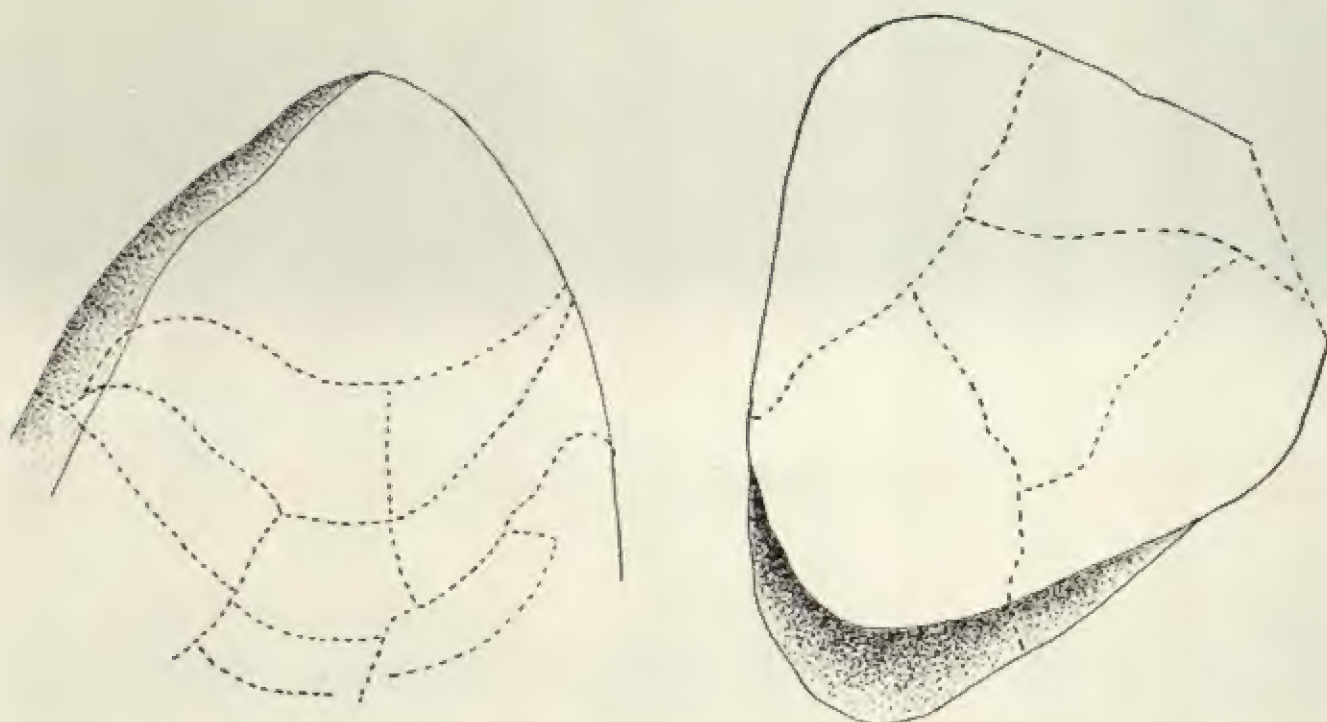


Field No.	Type.	Size and shape.	Condition.	Description.
60-12	Acheulean hand-axe.	12.1 × 6.5 × 3.0 Elongated oval.	Laterite tinted	Quartzite with very coarse grains. Worked all over. Has the characteristic S. twist.
*60-8	Do.	9.0 × 6.8 × 2.5 Ovale	Fresh-looking	From a core. Worked all over. Irregular margin. Ventrally, controlled flaking. Dorsally, series of stepped flake-scars.
*60-3	Do.	9.8 × 7.4 × 2.7 Pointed oval.	Slightly weathered, rough; laterite tinted.	Made from the side of a pebble, the cortex of which is seen dorsally. The edges bevelled dorsally. Nearly flat ventrally.
60-15	Do.	10.6 × 5.0 × 2.6 Lanceolate.	.....	Quartz. Very symmetrical.
60-16	Small hand-axe	6.7 × 4.2 × 1.9 Ovale	Tinted by laterite	Quartz.
60-2	Core	8.6 × 7.9 × 3.9 Lumpy	Brown patina.	
*60-9	Do.	6.4 × 6.6 × 3.8 Discoidal	Laterite tinted	Pebble surface seen on one side.
*60-11	Do.	6.7 × 5.7 × 2.9	Do.	Quartz. Worked all over.
*60-5	Hand-axe	11.3 × 8.1 × 5.0	Fresh.	Unfinished tool (?)
60-1	Awl-like tool	11.9 × 9.9 × 3.5	Do.	Large unfinished tool.
*60-19	Worked core.			
*60-7	Worked flake	Triangular.		
60-4	Do.	Crescentic.		
60-18	Do.	Do.		





(a) Section of Site A.



(b) Lines of artificially induced thermal fracture in a pebble of quartzite.

Photo-Litho. Office, Survey of India.







PEBBLE TOOLS AND HAND-AXES.



(a)



(b)



(c)



(d)



(e)



(f)



(g)



(h)



(i)



(j)

(a) A 530 (b) B<sup>1</sup> 28 (c) R<sup>1</sup> 53 (d) G 80 (e) A 178 (f) G 67 (g) R<sup>1</sup> 46 (h) G 2 (i) A 458 (j) A 1.







HAND-AXES, CORES, CLEAVERS ETC.



(a)



(b)



(c)



(d)



(e)



(f)



(g)



(h)



(i)



(j)



(k)



(l)

(a) G 41 (b) H<sup>2</sup> 3 (c) E 40 (d) A 208 (e) K 27 (f) K 39 (g) A 515 (h) A 93 (i) D<sup>3</sup> (j) K 44 (k) D (l) U 1.









(a)



(b)



(c)



(d)



(e)



(f)



(g)



(h)



(i)



(j)



(k)

(a) H<sup>v</sup> 28 (b) H<sup>2</sup> 15 (c) A 511 (d) A 251 (e) N 71 (f) A 179 (g) A 111 (h) V 27 (i) A 437 (j) H<sup>2</sup> 47 (k) A 523.







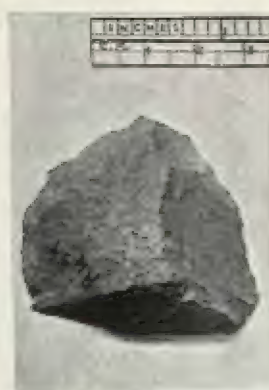
SCRAPERS, BLADES, GRAVERS AND SPECIAL TYPES OF TOOLS.



(a)



(b)



(c)



(d)



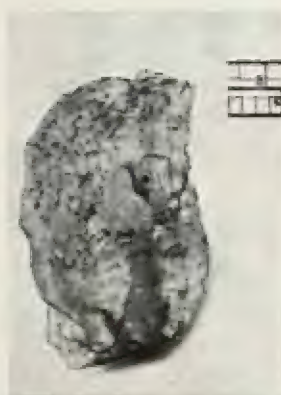
(h)



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(o)



(p)

(a) D 19 (b) B<sup>2</sup> 59 (c) A 454 (d) A 436 (e) F 19 (f) 29 4 (g) H<sup>2</sup> (h) H<sup>2</sup> 81 (i) A 27 (j) H<sup>2</sup> 38 (k) Q 4  
(l) J 16 (m) W 1 (n) A 560 (o) J 36 (p) A 142.







AWLS, GRAVERS AND SMALL HAND-AXES.



(a)

(b)



(c)

(d)



(e)



(f)



(g)



(h)



(i)



(j)



(k)



(l)

(a) A 24 (b) A 29 (c) A 410 (d) A 28 (e) B 23 (f) A 26/2 (g) A 255 (h) 10 13 (i) F 5 (j) A 264 (k) A 68 (l) O 8.



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